DOCUMENT RESUME

ED 434 407 EA 030 071

AUTHOR	Williamson, Ronald D.
TITLE	Scheduling Middle Level Schools: Tools for Improved Student Achievement.
INSTITUTION	National Association of Secondary School Principals, Reston, VA.
ISBN	ISBN-0-88210-327-X
PUB DATE	1998-00-00
NOTE	65p.; For a related document, see ED 357 488.
PUB TYPE	Reports - Descriptive (141)
EDRS PRICE	EDRS Price MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	Adolescent Development; Block Scheduling; *Flexible Scheduling; Instructional Effectiveness; *Middle School Students; *Middle Schools; Student Welfare; *Time Factors (Learning)
IDENTIFIERS	Adolescent Behavior

ABSTRACT

This book investigates school schedules by examining the use of time at the middle level and discussing strategies that schools may use to provide greater flexibility to the school day. Eleven specific scheduling models are presented and described. Complementing the models is a discussion of the factors that propel a school's investigation of alternative schedules. The manual views time as a resource and discusses ways to empower teachers to use time to make decisions. It also considers the role that adolescence plays in schedules and presents tips on how to schedule activities with this in mind. The text examines the importance of scheduling, outlines some scheduling myths, and explores the "block-time" schedule at length, considering its advantages and disadvantages for administrators, teachers, and students. Some block-time models are provided. Other kinds of schedules that are considered include alternate day, rotating, and dropped schedules. The booklet explores ways to get started on scheduling reform, offering details on planning steps, whether or not to use a computer, simulations, building the schedule, the uses of singletons and doubletons, staffing decisions, and selecting staff members. The text concludes with strategies for manipulating the schedule by challenging regularities, focusing on students, and starting small. (RJM)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 434 407

EA

SCHEDULING MIDDLE LEVEL SCHOOLS

Tools for Improved Student Achievement

Ronald D. Williamson

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY
R. Mahaffey
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
2B

National Association of Secondary School Principals

EA 030 071

BEST COPY AVAILABLE

Take the Lead with a Winning Team–
Sign up your School!

National Alliance of Middle Level Schools

An organization supporting the 21st century middle school through education reform and ongoing staff development.

You can make a difference for your school with unique benefits, including:

- Support and services for implementing ***Turning Points*** recommendations
- ***Schools in the Middle*** magazine and the ***Alliance*** newsletter for 25 of your teachers, parents, or school team leaders
- **10 copies of monographs** on important middle level issues for key staff members
- **Monthly audiotapes** on current school reform issues
- **Networking** with other middle level educators who are reform leaders
- **Discounted registration fees** for school teams at regional workshops
- **Access to website and network directory**

National Alliance of Middle Level Schools
P.O. Box 3250,
Reston, VA 20195-1250
(800) 253-7746
fax: (703) 476-5432
http://www.nassp.org

You can't beat this school-based staff development opportunity!

BEST COPY AVAILABLE

SCHEDULING MIDDLE LEVEL SCHOOLS

Tools for Improved Student Achievement

Ronald D. Williamson

National Association of Secondary School Principals

BEST COPY AVAILABLE

Scheduling Middle Level Schools: Tools for Improved Student Achievement is a companion monograph to Ronald D. Williamson's *Scheduling the Middle Level School*, published by the National Association of Secondary School Principals in 1993.

Ronald D. Williamson is a former middle school principal and Executive Director of Instruction for the Ann Arbor (Mich.) Public Schools. He served as Executive Director of the National Middle Schools Association in Columbus, Ohio. He is currently in the Department of Educational Leadership and Cultural Foundations at the University of North Carolina at Greensboro.

Copyright 1998
National Association of Secondary School Principals
1904 Association Dr., Reston, Va. 20191-1537
(703) 860-0200

Interim Executive Director: *Thomas F. Koerner*
Associate Executive Director, Director of Middle Level Services: *Susan Gilletti*
Director of Communications: *Robert Mahaffey*
Editor: *Russell Boniface*
Technical Editors: *Joy Evangeline Chau*
Eugenia Cooper Potter

ISBN: 0-88210-327-X

Scheduling Middle Level Schools:
Tools for Improved Student Achievement

TABLE OF CONTENTS

	Foreword	v
	Preface	vii
1	Time as a Resource	1
2	It's All About Adolescence	7
3	Issues and Considerations	11
4	The "Block-Time" Schedule	21
5	Alternate Day, Rotating, and Dropped Schedules	31
6	Getting Started	41
7	Breaking the Mold	53
Appendix A		
	Memo to Staff	57
Appendix b		
	Factors To Consider in Selecting a Scheduling Program	59

Foreword

Time. Principals and teachers will tell anyone who listens that time is the most precious of commodities in the education of our students. How do we find more time? And, how do we use the time that we have in the best possible ways to become high-performing middle level schools?

Research that is emerging suggests that small teams of teachers who use their time well have the greatest significance not only on improving the climate of schools, but also on increasing the academic achievement of students. Reform reports such as *Breaking Ranks: Changing an American Institution* and *Turning Points: Preparing American Youth for the 21st Century* reflect these findings in their recommendations for high school and middle level reform. These reports emphasize the importance of establishing small communities of learners, in which time and organization are manipulated to improve the learning conditions for adults and students.

Because of the significance of this topic, Ron Williamson's first monograph, *Scheduling the Middle Level School*, was one of the most popular monographs that NASSP published for middle level practitioners. This companion monograph, *Scheduling Middle Level Schools: Tools for Improved Student Achievement*, takes a fresh, updated look at specific strategies to best use time and the organization of a middle level school to affect school reform. In addition to examining the rationale behind using more flexible time to respond to the needs and characteristics of young adolescents, a variety of possible schedules are presented. The monograph is a must for any middle level practitioner interested in improving developmental responsiveness, social equity, and student achievement.

Time. Using ideas in this monograph, you can get a stronger grasp of this most precious of commodities. Your staff members and students will benefit as a result.

We are confident that you will find this monograph to be a valuable tool as you pursue the challenging and important work of making your school one that is high-performing for young adolescents.

Thomas F. Koerner
Interim Executive Director

Susan Galletti
Associate Executive Director,
Director of Middle Level Services

Preface

How many times have you heard the phrase "it's a great idea but you can't schedule it"? The complexity of the schedule is often used as an excuse to thwart efforts at meaningful school reform. Many educators believe that changing the schedule is an impossibility, thus constraining their abilities to respond to students' needs. Rather than confront the issues represented by the schedule, schools too frequently acquiesce and maintain the status quo.

Recently, several reports were issued that recommended significant changes in the structure of the secondary school day. *Breaking Ranks: Changing an American Institution* joined *Turning Points: Preparing American Youth for the 21st Century* to identify the use of time and organization as key variables affecting school reform.

This monograph is intended to take the mystery out of school schedules by examining the use of time at the middle level and discussing strategies that schools may use to provide greater flexibility to the school day. Eleven specific scheduling models are presented and described. Complementing the models is a discussion of the factors that propel a school's investigation of alternative schedules.

While the models are revised, the issues remain the same as in the first edition. Middle level schools continue to grapple with a fundamental issue—how to provide an instructional program that is more responsive to student needs and promotes higher levels of student achievement.

The challenges are immense. The rewards grand. Middle level educators have discovered that the schedule—the use of time—is a key to successfully achieving these goals.

Ron Williamson

Time as a Resource

A rite of spring in every middle level school is planning the following year's schedule. Mention of the schedule prompts thoughts of singletons, doubletons, conflict matrices, and stacks of course selection sheets. Teachers lobby for select schedules and preferred planning time. Parents request favorite teachers. Thus begins the quest for the "ideal" master schedule.

Middle level education is firmly rooted in an understanding of early adolescent students, founded on the premise that schools serving these students must implement programs that reflect a sensitivity to early adolescent development to maximize student learning. One way in which middle level schools attempt to achieve these goals is to modify organizational patterns, including implementation of teaching teams and a flexible schedule.

The interdisciplinary team is increasingly prevalent at the middle level (Valentine et al., 1993). The team is one tool for creating a more personalized school climate and serves as a way to move curricular and instructional decisions closer to students. Advocates of teaming laud the ability of teachers to make decisions about grouping practices, instructional strategies, and use of time. Those same studies, however, show that the prevailing format for scheduling courses in middle level schools, particularly at grades seven and eight, is the traditional period-by-period departmentalized approach.

For many middle level educators, the value of the team is its flexibility and responsiveness to students. Teachers on many teams may decide on the team's schedule, including modifying it for special projects and activities. The schedule becomes an instructional tool that can be used to affect teaching and learning. Teachers may also choose to maintain a traditional schedule of separate fixed-length classes.

Emphasis has often been placed on the organizational elements of teaming and block scheduling. Principals and teachers struggle with decisions about the number of team members, the amount of planning time, or the length of instructional blocks. These "inputs" often facilitate the discussion, but frequently become the ends rather than the means.

The struggle for the "ideal" schedule distracts middle level educators from the important tasks of finding ways to build flexibility into the school day, respond appropriately to the early adolescent learner, and visualize time as a resource to be used for the improvement of teaching and learning. There must be a shift from the implementation of prescribed "inputs" (schedule) to utilization of a variety of approaches to ensure critical "outputs" (learning) for early adolescent learners. Such a shift requires recognition that there is no one scheduling model appropriate in all settings, but rather several alternatives, each with advantages and disadvantages.

Time as a Resource

As schools engage in their quest for the "ideal" schedule, it's important to maintain a perspective on the scheduling process. Thousands of good schedules exist; there are no perfect ones. Each schedule reflects the unique characteristics and resources of its school community, and establishes a framework for the work of teachers and students.

In *Successful Schools for Young Adolescents* (1984), Joan Lipsitz describes the programs of four successful middle level schools. She found that each school used a different organizational model. Each model evolved over time, and none of the schools was completely satisfied with their current model. She summarized the schools' efforts:

> The lesson about structure is seen in words like organic and evolving. The principals had a vision of what schooling should be like for young adolescents that did not start with teams or houses. Organizational decisions resulted from school philosophy. School philosophy was deeply influenced by sensitivity to the age group. It was also influenced by the personalities of talented leaders and a core group of highly dedicated teachers responding to the clamorous demands of a group of students whose energies they enjoy and wish to promote (p. 193).

An important lesson emerged from this work. Time and structure must be seen as resources to be used to benefit students, rather than something to be managed and controlled. Creative and flexible use of time must become the norm. Teachers and principals must find ways to respond organizationally to their commitment to the early adolescent learner.

Four attributes emerge from schools that view time as a resource rather than a barrier. First, those schools utilize a variety of organizational arrangements to ensure flexibility. Flexibility is not linked solely to the interdisciplinary team. Second, teachers in such schools are empowered to make decisions regarding the use of time. Third, a premium is placed on flexibility and responsiveness in the school's routine. Finally, these schools modify their curricular and instructional practices to take advantage of the flexibility in their schedule to ensure that time is used as a resource.

A Variety of Organizational Arrangements

Using a range of organizational structures is one mechanism to provide flexibility in the school day. Schools have adopted a number of practices reflecting such a change. A school in Arizona organized teams of various sizes and configurations. Some teams have two teachers, others four. Some teams stay together for more than one year, others change every year. A school in Michigan provides another example. Its program offers both a departmental-based program and an interdisciplinary team option. Students and parents select the program in which they will participate.

Other organizational arrangements emerge. A school in Ohio created three small houses to serve its nearly 1,000 students. Each house comprised three teams—one sixth grade, one seventh, and one eighth—and occupied a separate floor of the school. While the students have different teachers each year, they remained part of the same house. This provided continuity in expectations and requirements and built a sense of community among students and staff members. Students saw and interacted with the same set of teachers for three years. This sense of membership and belonging served as a powerful influence on both student and teacher behavior.

Such organizational arrangements provide a structure in which teachers and students can utilize their time more effectively and efficiently. It enhances interdisciplinary contacts, provides options for multi-grade groupings, and allows for easier modification of the daily schedule.

Empower Teachers To Use Time To Make Decisions

Schools that regard time as a resource also place importance on empowering teachers to make decisions regarding its use. A recent study of effective middle level schools in Michigan found that principals of schools that successfully implement interdisciplinary teaming empower their teachers to make decisions about use of time and other instructional activities. For example, in one school the teachers on an eighth grade team experienced problems with a group of students. The students misbehaved repeatedly and were not completing assignments. The team met, discussed the situation, and altered the students' schedule within the team. After the move, the students' work improved and they were more positive about team activities. The team leader described the importance of being empowered to make such decisions: "The team was able to identify the problem, discuss our options, and make a decision to resolve it."

At another school, the seventh grade team had a four-class period block each morning. Both the art and physical education teacher were part of the team. During this block, the students were to participate in physical education and art. Swimming was a part of the physical education program and the pool was located in a nearby building. Students had to walk from one building to another, using valuable instructional time.

The physical education teacher met with the team to discuss the problem. As a team, they devised a solution. Rather than have students go swimming on the normal schedule every other day for two weeks, they would modify the schedule so that students went swimming for two hours on four consecutive days. This improved the quality of instructional time, minimized the disruptions to the team's program, and made it easier for students to remember to bring swimsuits and towels.

Teachers emphasized the importance of trust between principal and teacher. When teachers are empowered to make decisions regarding the use of time or instructional strategies, they must be trusted to implement, evaluate, and modify such practices. A principal in suburban Detroit described the importance of trust: "I want my teachers to try new things, to take instructional risks. Not everything will work exactly the way we want. I don't second-guess their action. But if it doesn't work or isn't effective, the expectation is that you'll learn from the experience and try something else."

A Premium on Flexibility

Several options also emerge regarding the structure of the school schedule. Some advocate that flexibility is only possible with a team-based, block-of-time schedule. While such a model has many advantages, other models also provide flexibility for teachers and students. They include the Copernican plan for large trimester classes (Carroll, 1989), the four-block semester plan (Edwards, 1993), the eight-block alternating day schedule (Hackmann, 1995), and rotating and dropped schedules (Williamson, 1993).

Each model provides more options for greater flexibility than the traditional departmentalized schedule. Each possess advantages and disadvantages and should be evaluated based on the

resources of the local school, the receptivity of teachers, parents, and students, and the impact on such variables as staff sharing with other schools. Consideration should be given to maximizing the potential to accomplish the following:

- Varying the length of time allotted to individual subjects based upon teacher and student need
- Providing options for special activities such as assemblies, team meetings, field trips, and other activities without disrupting the structure of the entire day or disrupting other staff members
- Permitting opportunities to group and regroup students without totally reorganizing classes or tracking
- Developing opportunities to correlate subject matter and engage in interdisciplinary instruction
- Ensuring options to organize students for both large and small-group instruction.

An eighth grade team at one midwestern middle level school was concerned about student behavior and attitude. The team had a four-hour block from 8 a.m. until noon. During that time, students rotated among the four teachers. After lengthy discussion, the team decided to rotate the groups throughout the year. For one group of students this meant that in September they went to science first, followed by math, social studies, and language arts. Beginning in October the rotation changed to math, social studies, language arts, and then science. In November it was social studies, language arts, science, and math. Every month of the year the schedule rotated.

Both teachers and students raved about this arrangement. Teachers who had previously seen students just before lunch discovered that the students were quite different first thing in the morning. Similarly, teachers taught differently early in the day as contrasted to later in the day. The rotated schedule provided fresh perspectives for both students and teachers, and provided a more balanced approach to teaching and learning in each area.

Modify Curricular and Instructional Practices

Changing organizational arrangements and building flexibility into a school's schedule only creates the potential for curricular and instructional improvement. Modification of curricular and instructional practice is required in order to take full advantage of the opportunity created by such changes.

Schools that view time as a resource use a variety of learning practices. Students engage in hands-on activities, examine and suggest resolutions to problems, investigate the implications of scientific and social issues, and work collaboratively with other students to apply and demonstrate their learning.

Teachers use a range of instructional practices as well. Large group and small group instruction, more flexible grouping and regrouping of students, and increased interdisciplinary work are possible in such settings.

Such classrooms provide a rigorous academic experience. Students are expected to engage in a curriculum rich in scientific thought, mathematical reasoning, and written and oral expression. Those classrooms also reflect the use of instructional practices that require students to do more than just store and retrieve information. Students must analyze, synthesize, and evaluate information and ideas, thus engaging in critical thinking and productive problem solving.

Summary

Successful middle level schools are those at ease in examining their practice and making necessary adjustments. They accept the norms of traditional middle level practice where appropriate and challenge those that no longer fit. Every aspect of their program is examined for its impact on the school's ability to effectively serve students.

Schools are increasingly examining the use of time and structure as one variable which, when altered, can significantly affect the quality of their program. Viewing time as a resource to be used in flexible and responsive ways is a significant departure from the practice of many schools. Schools that make the adjustment utilizing a range of organizational arrangements, empower teachers to make decisions regarding the use of time, place a premium on flexibility inherent in a variety of models, and modify curricular and instructional practices.

The quest for the "ideal" schedule continues. It is critical is to understand the importance of the quest, not the adopted schedule. Keep searching for the ideal schedule, all the while understanding that there is no perfect model.

References

Carroll, J. M. "The Copernican Plan: Restructuring the American High School." Andover, Mass.: The Regional Laboratory for Educational Improvement of the Northeast and the Islands, 1989.

Edwards, C. M. "Virginia's 4 x 4 High Schools: High School, College and More." *NASSP Bulletin*, May 1993.

Hackmann, D. G. "Improving the Middle School Climate: Alternating-Day Block Schedule." *Schools in the Middle*, September 1995.

Lipsitz, J. *Successful Schools for Young Adolescents*. New York: Transaction Books, 1984.

Valentine, J.; Clark, D.; Irvin, J.; Keefe, J.; and Melton, G. *Leadership in Middle Level Education. Volume I*. Reston, Va.: National Association of Secondary School Principals, 1993.

Williamson, R. *Scheduling the Middle Level School To Meet Early Adolescent Needs*. Reston, Va: National Association of Secondary School Principals, 1993.

Williamson, R., and Johnston, J. H. *Through the Looking Glass: The Future of Middle Level Education*. Available on NASSP's website at http://www.nassp.org/services/srvc_frm.htm; click on Middle Level Programs.

CHAPTER 2

It's All About Adolescence

Early adolescence is a time of tremendous physical, social, emotional, and intellectual change. Joan Lipsitz, author of *Successful Schools for Young Adolescents* (1984), says that more changes take place during this time than during any other, except the time from birth to age three.

While adolescence is marked by profound changes in physical appearance, the age at which the changes take place varies widely. While not universally true, girls generally mature earlier than boys. This maturity difference accounts for some of the changes in social interactions between boys and girls that occur during adolescence.

Changes in metabolism, heartbeat, blood pressure, and pulse—due in part to tremendous physical growth that takes place during adolescence—cause students to be energetic and restless one moment, then listless the next.

The onset of puberty in both boys and girls means that students become increasingly sensitive to—and often intolerant of—the sexual maturation they are experiencing. Changes in voice, the appearance of body hair, and the development of secondary sex characteristics often leave the middle level student uneasy and extremely self-conscious. Middle level students who look as though they belong in high school are seated adjacent to youngsters whose feet barely reach the floor.

While physical growth and maturation are the most obvious of the developmental changes, the area that is most confounding to parents and educators is the change in social and emotional development. During the middle grades, students increasingly seek independence from adults and conformity to peers. They strive for independence, yet seek guidance. They need both personal attention from adults and identification with peers.

Middle level students are often very concerned about the way they are perceived by others, particularly their peers. They play to an "imaginary audience." For example, when a student trips going up the stairs, the most common reaction is to look around and see if anyone is watching.

In their quest to achieve acceptance, adolescents often overcompensate and seek conformity in dress, hair style, music, and other indicators of the peer culture.

While adolescents are striving for increasing independence, most report positive relationships with their parents. Joan Lipsitz and Gayle Dorman cite evidence that while many disagreements between parents and students occur during the middle school years, the primary issue seems to be the family adjusting to the rapid developmental changes of the adolescent, rather that the strife and dissension of a child rebelling against family beliefs or practices (Lipsitz, 1984).

While changes in the intellectual realm are less visible, they often rival the rapid physical growth in importance as they, too, affect both social and emotional development.

In early adolescence, youngsters begin to move away from the almost complete reliance on their own concrete experiences and toward the ability to consider alternatives. The ability to develop hypotheses, consider "what if," think reflectively, and reason abstractly characterizes this period. As in other areas of development, the changes do not take place in a linear progression, but often surface in fits and starts. One day a youngster can deal with complex abstract concepts and the next will once again require instruction in the most concrete manner.

The challenge for middle level teachers is to adjust the instructional program to take into account students' differences in cognitive development—the differences from student to student and from day to day.

In addition to great variety in learning styles and thinking abilities, the interests of early adolescents change frequently. They are curious and interested in trying many different activities. These changing interests also affect the instructional program and structure of lessons taught at the middle level.

The combination of factors such as peer pressure and self-esteem may result in some early adolescents voluntarily suppressing academic achievement. Students at the middle level who are quite capable of high academic achievement may choose to perform at a lower level, fearful that if they achieve "too well" in school they will not be accepted by their peers. Parents and other adults, aware of the student's prior academic success, become rightfully concerned about such behaviors.

Summary

The range of developmental issues dealt with by early adolescent learners requires that school personnel use a range of instructional practices. There are a number of organizational factors that can be of assistance as teachers respond to the developmental diversity present in their classrooms. One of them is the use of time. The structure of the day—number of classes, length of class periods, opportunities for interaction with peers and adults—contributes to the success of students and teachers.

For many students, the traditional six or seven-period day schedule constrains learning. It does not respond appropriately to the need of early adolescent learners for active, hands-on learning, nor provide opportunity for connections between content areas. It also inhibits teachers' ability to respond creatively to the needs of students.

Adolescence is a wonderful time of profound change for youngsters as they make the adjustment from childhood to adulthood. It is the time when most students experience significant physical growth and become increasingly concerned about their role in the larger world.

While adolescents' physical growth is most apparent, the social and emotional changes, as well as the cognitive changes, are equally important. Adolescents are increasingly concerned about their connection to a peer group, seek greater independence from adults, and require frequent opportunities to experience success. As adolescents change intellectually, they begin to be able to deal with abstract concepts instead of operating solely in the concrete realm.

The way schools respond to this diversity is important. Examining and refining the structure of the school day—the use of time—has a profound impact on the school's ability to provide for the

learning needs of its students. The remainder of this monograph will investigate issues related to designing a schedule that responds to early adolescent needs. It will examine a range of schedules, identifying the advantages and disadvantages of each, and offer a menu of options for the effective use of time.

References

Berla, N.; Henderson, A. T.; and Kerewsky, W. *The Middle School Years—A Parent's Handbook.* Columbia, Md.: National Committee for Citizens in Education, 1989.

Elkind, D. *The Hurried Child.* Reading, Mass.: Addison-Wesley, 1981.

Lipsitz, J. *Successful Schools for Young Adolescents.* New Brunswick, N.J.: Transaction Books, 1984.

Lounsbury, J.; Mariani, J.; and Compton, M. *The Middle School in Profile: A Day in the Seventh Grade.* Columbus, Ohio: National Middle School Association, 1980.

Milgram, J. "The Sixth Grader: A Profile." *Life in the Three Sixth Grades,* edited by J. Lounsbury and J. H. Johnston. Reston, Va.: National Association of Secondary School Principals, 1988.

———. "The Eighth Grader: A Profile." *Inside Grade Eight: From Apathy to Excitement,* edited by J. Lounsbury and D.C. Clark. Reston, Va.: National Association of Secondary School Principals, 1990.

———. "The Ninth Grader: A Profile." *How Fares the Ninth Grade?* Reston, Va.: National Association of Secondary School Principals, 1985.

Issues and Considerations

Successful middle level schools respond to the developmental needs of their students. One organizational element that influences the degree to which a school is able to respond is the structure of the school schedule.

The rapid physical changes that take place during adolescence mean that students are often restless and have a short attention span. Therefore, an appreciation that middle level students begin to think abstractly at different times, not one fixed time, may affect a school's grouping practices. Structuring a schedule to ensure frequent opportunities for movement may greatly enhance the school's ability to respond to student needs.

Preparing a school's schedule can be tedious and time-consuming, particularly if it is approached as a test of management skills. Scheduling can, however, provide an opportunity to address goals, promote innovations, strengthen problem-solving skills and, more appropriately, serve students.

This chapter will discuss some of the issues that must be considered when contemplating fundamental changes to the structure of a schedule. Some of the myths associated with flexible scheduling will be explored, followed by an examination of six considerations that should guide thoughtful planning. Subsequent chapters will explore 11 specific scheduling options that use a range of organizational arrangements to provide increased flexibility to the school day.

The Importance of Scheduling

Scheduling is a vital function for middle level administrators for several reasons.

The schedule is a tool to serve students. The structure of the student day and the ease with which students are able to access a school's curricular program will be either helped or hindered by the format of the school schedule.

The schedule also promotes a particular philosophy about the way teachers and students interact, and either creates opportunity for improved service to students or erects barriers that inhibit instructional responsiveness.

Scheduling promotes delivery of the curriculum and addresses the instructional needs of staff members and students. The schedule determines whether or not all students are able to have equal access to curriculum offerings.

The experience of one school illustrates the impact. Organized into interdisciplinary teams at all grades, this school strived to provide all teams at a grade level with a similar schedule and common planning time. Because of the need to share teachers

with the high school, as well as share classrooms between teachers, the school scheduled band at a time when not all eighth graders could participate. Recognizing that this was not a viable option, all band students were placed on one team. Early in the school year, both the teachers and students became concerned with the arrangement. The presence of band members on one team, and not on another, affected the instructional program, resulting in a highly grouped program—contrary to the original intention. The schedule violated one of their most prized beliefs about education in the middle grades.

Scheduling Myths

A number of myths have emerged about scheduling, particularly flexible scheduling models. Dispelling some of these myths helps middle level educators design and implement a sound school schedule.

Myth #1 - Schedules are interchangeable. Just as no two classrooms are alike, no two middle level schools are identical. The obvious characteristics such as enrollment and physical plant affect the structure of a school schedule. Enrollment determines staffing levels and the comprehensiveness of the program, while the physical plant influences the school's ability to respond to needs for flexible space and adjacent classrooms. Most middle level buildings were not designed around the middle level concept, limiting the flexibility of building use.

Each of these factors influences the nature of the middle level program and, thus, the structure of the schedule. A schedule that works well at one site may not be appropriate in another location.

Myth #2 - Everyone will love a flexible schedule. Every school has staff members who oppose every initiative. They will also oppose a flexible schedule. The flexible schedule requires that staff members assume roles they may not have experienced. It often requires communication with colleagues on a team, advance planning, and thoughtful deliberation about the needs of both students and the curriculum.

Middle level administrators must provide staff members with the opportunity to learn about the new structure, talk about its implementation, and work with colleagues to develop the skills necessary for successful implementation. The challenge is to ensure that the focus remains on addressing the needs of students rather than ensuring the comfort level of the staff.

Myth #3 - Flexible scheduling is less work. Implementing flexible scheduling requires teachers to interact with their colleagues in nontraditional ways. This interaction around both curricular issues and the use of blocks of time can require additional time for discussion and planning and create interpersonal conflicts that may require resolution.

A flexible schedule may significantly alter the way staff members interact. Teachers will need to review the allotment of time and make decisions regarding the interrelationship of the curriculum. Keeping the focus on students and their needs will result in a program that offers the likelihood of both improved student achievement and attitudes about school.

Myth #4 - All blocks of time and schedules must be alike. Just as every middle level student is unique, so are the teams of teachers working with the students. The power of a flexible schedule is the ability of a teaching team to respond to the needs of the students. The needs of sixth graders differ from the needs of eighth graders. The strengths of one team will differ from those of another. The schedule's responsiveness to student needs is a major indicator of the strength of the overall middle level program.

When a school begins to consider changing its schedule, a number of factors must be considered. Schools are complex organizations, comprising a variety of programs, many with different and occasionally conflicting needs. Before initiating an investigation of scheduling options, it is important to examine several critical variables.

Schedules tend to have a life of their own. They are frequently static. Familiarity with one model, comfort with the nuances of an approach, belief that change will be too difficult, or that the barriers are too severe serve as convenient rationales for maintaining the status quo.

Before contemplating schedule changes six factors must be examined. Some address important organizational issues, e.g., timelines and planning, while others deal with philosophical issues such as school philosophy and beliefs. Each is critical to the success of any new scheduling venture. Schools that fail to consider them in their planning often discover that they are essential and must discuss their impact at a later date.

1. The Importance of a School's Philosophy

Since the structure of a master schedule plays such a significant role in defining a school's program, every factor that may affect local flexibility and serve as a constraint on the school's schedule must be identified early in the process. Knowledge of these factors can guide planning and inform the selection of program options.

No factor is more important than the stated mission or philosophy of a school. The schedule is one tool that makes it easier for both students and teachers to accomplish the mission. For example, attention to the developmental needs of middle level students may require a review of the structure, length, and sequence of classes, and time allotment for the lunch period.

In addition, a middle level school with a teaming or advisory program may want to structure the day so the teams share schedules and common planning time, and ensure that advisory is scheduled to maximize the program's objectives.

Regardless of the program manifestations, it's critical that school personnel be clear about beliefs guiding their work prior to initiating schedule changes. Building a schedule grounded on shared beliefs and a common vision helps ensure that once the schedule is in place, teachers and other personnel will see it as a tool for increased responsiveness to student learning needs.

The schedule is a powerful tool to shape and mold a school's program. It is one of the most tangible indicators of a school's beliefs about education. Therefore, it is critical that it be built on a solid foundation of guiding principles and philosophical beliefs about schooling.

While the stated mission of the school and the programmatic components of a school should be the primary focus of a school schedule, administrators must consider other local parameters and guidelines as well. These include bus schedules, physical plant, length of the school day, and contractual conditions of employment for teachers and other staff members. These factors do not function in isolation; they interact with one another. This interconnectedness challenges administrators developing the schedule.

2. Scheduling Priorities

It is possible to achieve nearly any goal through the structure of a school schedule. The problem is that no school is able to achieve all its goals in any single schedule. It's all about priorities.

Planning for the following year's schedule often begins at an early date—February in many schools. Initial activities center around establishing a plan, detailing the timeline, and preparing materials for use with staff, students, and parents.

A scheduling plan should include steps to address several issues: parent and student orientation; the course selection process; staff involvement in deciding scheduling priorities; the timeline for schedule simulations; and a process for finalizing and distributing individual student and teacher schedules.

Timelines can list each part of the scheduling plan along with the date on which the step is to occur. Establishing a calendar allows the scheduler and other interested personnel to carefully monitor each step of the process. It provides clarity about the process and articulates the critical steps along the way.

When developing the timeline, several items must be considered: classroom visits to meet with students; parent information sessions; modification and printing of course selection materials; accountability for each component of the plan; and training for those involved in each step of the scheduling plan.

Scheduling goals also provide a focus for the scheduling plan. Examples of such goals include:

- All students will be scheduled by the end of the school year.
- The priority for long (more than two class period) blocks will be with the sixth grade.
- All teaching blocks will be at least two class periods long.
- No more than two sections of physical education will be scheduled at any one time.
- All staff members will be notified of their tentative assignments by the end of the school year.

Goals such as these are very attainable. Realistic planning and careful implementation of the plan will help to ensure accomplishment.

Scheduling also involves gathering and processing immense amounts of information. Determining the information needs and gathering the data prior to scheduling are important first steps.

A list of elementary school students who will be moving to the school will allow the middle level administrator to become familiar with incoming students. Knowledge of students who qualify for special services such as reading support or special education is helpful. Data regarding the ethnic and socioeconomic status of all students help to achieve balance in construction of classes.

Middle level administrators will also want to ensure that all incoming students have enrolled and selected classes prior to the assignment of staff because the number of teachers assigned to the school and to particular classes is often driven by student enrollment.

A list of teachers, room numbers, courses offered, student numbers, and the number of students electing each course also assist the administrator in constructing the schedule.

Schools utilizing a computer to manage the scheduling task must continually update the computer files to ensure the accuracy of the course table and student files.

Establishing scheduling priorities is one of the most important scheduling activities, yet it is also one of the easiest to overlook. Middle level schools must determine what they wish to accomplish, what programs they want to facilitate, and what goals they want to meet via the master schedule.

The school schedule is a powerful tool for managing a school. Once a schedule begins to take shape it is difficult to modify. Therefore, school priorities to be achieved through the master schedule must be detailed early in the process.

The central question is: What does a school want to accomplish through the master schedule? Such issues as implementing common planning time, block scheduling, teaming arrangements, and an adviser/advisee program fit into this category. Determining priorities before constructing a schedule provides an opportunity to develop a schedule that addresses identified needs. Hoping that priorities will be met "by chance" can lead to frustration. Setting priorities at an early date and working to make them happen can be rewarding.

Using a worksheet like that illustrated in Figure 1 can offer a very visible look at the structure of the school day. It allows the scheduler to manipulate the placement of key factors—blocks-of-time, common planning schedules, singleton courses such as band or orchestra—and determine any readily apparent conflicts. It can also be used to identify any special problems that must be resolved and any constraints on the schedule such as shared teachers or planning needs.

Figure 1 **Scheduling Worksheet**

	Sixth	Seventh	Eighth
1			
2			
3			
4			
5			
6			
7			

Courses Requiring Special Consideration

Course	Hour

Planning Time Needs

6th

7th

8th

Exploratory

Issues To Be Resolved

1.

2.

3.

3. Student Learning Needs

It is easy to lose sight of the primary reason for schools—to provide students with a successful educational experience. Particularly when thinking about schedule changes, it is easy to get mired in logistical considerations (e.g., bus and lunch schedules, length of the day), and the impact on the workday for adults (e.g., length of class periods, planning time, number of classes). Each of these is important, but they are all secondary to the impact on students and their learning.

The schedule is one tool, a powerful one, for responding to the unique learning needs of students. The organization of the day, the ability of adults to collaborate and work together, and the number of different settings for students all contribute to their success. Flexible scheduling models offer strategies to modify each of these factors and create a more optimal setting for students.

As a school contemplates altering the structure of its schedule, it is important to assure that teachers have the skills and materials to maximize the use of the new schedule. Such changes are often viewed with some skepticism by new and veteran teachers. The success or failure of any new model hinges on the ability of these teachers to successfully make the transition to the new model.

Creating a flexible schedule is just the first step. Teachers must be supported as they implement the new model. This support includes several components.

First, administrators must provide appropriate training to help the teachers develop an understanding of the concept, become familiar with the advantages and disadvantages of the model, and work with their colleagues to develop activities and models that take advantage of a flexible schedule. Hackmann and Schmitt (1997) identify a number of teaching strategies for successfully using a flexible schedule.

Using a range of instructional strategies is important to the success of a flexible schedule. It is essential to continuously engage students in active group learning that incorporates the multiple intelligences and creative thinking. Flexible schedules will provide the opportunity to move beyond the classroom for instruction, allowing teachers to employ a greater range of assessment strategies and sharing of ideas and resources with colleagues (Hackmann and Schmitt, 1997).

Second, administrators must recognize that while some teachers will enthusiastically implement a flexible schedule, others will resist until it is clear that the model will be successful.

Third, administrators must help teachers respond to the questions of parents and others, such as "How do you ensure that the curriculum is being taught?" and "Does this meet all the state requirements for minutes of instruction?"

4. There Are No Perfect Schedules

At a recent professional meeting a principal stopped and asked if I could send him two or three schedules for his school. In great detail he explained the school's size, the curriculum, the length of the day, and other factors that affect a schedule's structure. He closed the conversation by affirming his desire "to see the perfect schedule."

I was sorry to disillusion him. There are no perfect schedules. There are hundreds of wonderful schedules used in schools, but none are perfect. When contemplating making a fundamental change to a school's schedule, the quest becomes to "seek the perfect schedule" while knowing that no such schedule exists.

Numerous factors affect a school's ability to construct a schedule: school size; the number of students and teachers; the number of teachers shared with other schools; class size requirements;

capacity of the lunch room; grouping policies; contractual requirements; and starting and ending times all affect the school schedule.

A middle school principal in Michigan recently distributed a memo to her staff that described all the parameters affecting their ability to create the "ideal" schedule. Several of the considerations described in the memo demonstrate the complexity of developing a flexible block-time schedule (see Appendix A for the complete text of the memo):

- Time parameters: Begin at 8:05, end at 2:45; 25-minute advisory; seven 45-minute classes; five-minute passing time; three lunch periods of 30 minutes each.
- No teacher may teach more than 300 minutes consecutively without a lunch break or planning period.
- No more than two-thirds of the students may be in electives at any one time because there are not enough classes to accommodate them.
- Two orchestras must be scheduled consecutively due to a part-time teacher.
- Seventh and eighth graders must have two common elective periods to accommodate singleton electives open to students in both grades.

Every school will have its own set of constraints and parameters. When considering changes to the schedule, it is important to identify all the factors that will either restrain or enhance the development of a schedule.

The quest for the perfect schedule is a noble journey. At its root is the desire to more effectively serve a school's most important clients—its students. Schools should gather information from other schools—form critical questions; examine a range of alternatives; develop suggested strategies; and try some new approaches. Never expect that they will devise the "perfect" schedule.

5. Collaboration Is Critical

Traditionally, the middle level school day has been composed of a series of equal-length class periods. Students moved from classroom to classroom at an established time, signaled by the ringing of a bell.

Adopting a flexible scheduling model may mean modifying this traditional school organization. One implication is the reduction of standard-length class periods and the attendant movement of the entire student body in the hallways several times during the school day. Since all classes may not be the same length or meet at the same time, another implication may be the reduction or elimination of the bell to signal the beginning and end of class periods.

Each of these changes may require modifying the very culture of the school. Teachers, parents, students, and even the middle level administrator may only be familiar with the traditional organizational patterns. Modifying these cultural norms will require sufficient planning and discussion of all the implications of such a change.

Such planning will only be successful if those most affected by the changes—teachers, students, and parents—are informed and involved in the planning. Collaboration with these key groups allows them to become supportive of any new initiative and to develop a sense of ownership with the adopted model.

A middle level principal in Pennsylvania chose to involve teachers and parents in the planning at an early step. He said the benefits "were immense; they raised really important questions, things

I might not have thought about. It's a better schedule because of their input." One of the assistant principals in the school added, "Success of the new schedule requires their involvement. We could always change the schedule. What we really wanted was for the teachers to see how they could use this new schedule to serve kids."

Adequate planning includes creating a common information base about the current conditions and the rationale for a modified structure, involving all school constituencies in the development of a scheduling model, and attending to the needs of all constituencies to be informed about the modified structure. These and other aspects of program planning are discussed in detail in the NASSP publication *Planning for Success: Successful Implementation of Middle Level Reorganization* (Williamson and Johnston, 1991).

A school for military dependents in Puerto Rico developed a multi-year plan for changing their school's schedule. Teachers and parents identified critical issues and questions requiring resolution. Sheets of butcher paper were placed around the faculty lounge, marked in two-month increments. People were then invited to use "Post-It Notes" to identify the key items that needed to be completed. Duplicates were easily removed and those that remained were moved around until the paper became a visible list of steps in the planning process. The public nature of this involvement served as a clear signal of the importance of teacher and parent involvement.

At a school in Arizona, staff members were invited to list critical questions regarding a proposed new schedule. The questions were collected, collated, and served as the basis for subsequent planning and training opportunities. Identifying the questions was important, but perhaps more important was legitimizing the concerns and then responding to them.

6. *The Goal Is To Get Better*

As described earlier, there are imperfect schedules. The goal of most schools is to improve their schedule so that it provides a more effective learning environment for students. Designing a way to routinely gather information about the schedule is one strategy that schools use to refine their program. A principal described the problem, "Every fall we talk about how the schedule can be improved—lots of good ideas. Every spring we try to remember what we said in the fall. We've got to organize the process."

What this principal described is the need to systematize gathering information about the impact of the schedule. The following ideas, based on the experiences of middle level schools, are worth considering:

- Ask those who work most closely with schedules (e.g., counselors, administrative staff) to list the most frequently encountered problems.
- Invite teachers to offer suggestions for refining the schedule (e.g., are there groups of students not served well, routine conflicts between courses).
- Ask departments to design plans that might contribute to greater balance in the number of students in each class.
- Survey students about the impact of the schedule.
- Maintain a file of all letters or other correspondence about the schedule.
- Hold a focus group interview with a group of teachers and or students about the schedule.
- Conduct a shadow study of selected students with the goal being to assess the effect of the schedule on them.

The goal of these activities is to enlighten discussions about subsequent schedules. Routinely gathering information, sharing it with appropriate personnel, and using it to inform scheduling decisions is a critical factor in the success of any new scheduling initiative.

Summary

Effective middle level schedules are flexible, respond to student needs and are based on a stated philosophy and goals. The needs of students and the program drive the schedule's development. Ensuring the inclusion of blocks of instructional time, appropriate planning time for staff members, advisory time, flexibility for special schedules, and providing for the needs of both elective and core programs are examples of factors that guide development.

When considering adoption of a new scheduling model it is important that schedulers remember several key factors. The schedule should be a tangible reflection of the school's mission or philosophy. This philosophy should guide the selection of a model and inform its use. Student learning and the impact of the schedule on student success is a primary consideration and is closely related to the school's mission and philosophy.

In addition, schedulers must remember that nearly anything can be scheduled, but establishing priorities is a must. All schedules can be improved, and many schools are actively gathering information to enlighten subsequent scheduling decisions.

Finally, no scheduling change will be successful without the support of those closest to students—teachers and parents. Involving them in planning and designing any modified schedule is critical. Their participation enriches the conversation and assuredly results in a stronger, more viable alternative.

References

Clark, S. N., and Clark, D. C. "Restructuring Middle Schools: Strategies for Using *Turning Points*." *Schools in the Middle*, December 1990.

Hackmann, D., and Schmitt, D. "Strategies for Teaching in a Block-of-Time Schedule." *NASSP Bulletin*, April 1997.

Traverso, H. *New Directions in Scheduling the Secondary School*. Reston, Va.: National Association of Secondary School Principals, 1996.

Toepfer, C. F. "Middle Level School Grades and Program Development." *Schools in the Middle*, April 1990.

Williamson, R., and Johnston, J. H. *Planning for Success: Successful Implementation of Middle Level Reorganization*. Reston, Va.: National Association of Secondary School Principals, 1991.

CHAPTER 4

The "Block-Time" Schedule

The term "flexible schedule" may at first be considered an oxymoron. How can one develop and adhere to a schedule, while at the same time provide flexibility?

Flexibility in a schedule is as much an attitude as a concept. While the ideal schedule might allow every teacher in every course and content area total flexibility in providing for the instructional needs of students, the reality of managing a middle level school quickly establishes parameters that impinge on total flexibility.

The term "flexible scheduling" refers here to arranging classes to provide the instructional staff with options for altering or modifying the schedule on a daily basis.

Designing flexibility into the schedule is one way to respond to the diverse needs of middle level students. It permits teachers and students to vary the routine and location of classes. At one midwestern middle school, an interdisciplinary team had a four class period block that extended from 8:30 a.m. until noon. During that time, four content areas were taught. During one team meeting each week decisions were made on the allocation of time among the different subjects.

The impact of this team's flexibility is illustrated by two examples. The science teacher wanted additional time for conducting labs. The goal was to set up the lab, conduct the lab, clean up the lab, and discuss the lab in one session. To accommodate this need the team agreed that science labs would meet for 100 minutes rather than the routine 50-minute class period. This, of course, required other teachers to vary their schedule, and they quickly found ways to maximize use of the lengthened instructional periods.

The science teacher was unable to meet all classes on lab days. However, she described the benefits: "I really have no more minutes of instruction, but I changed the quality of the time. Instead of conducting the lab one day and discussing it another, I was able to focus the students' interest. The quality and productivity of my time in science lab was greatly increased."

Another team with a morning-long block of time observed a common school phenomenon. They noticed that some students were more attentive and engaged in their classes early in the day. Just before lunch their attention lessened.

After lengthy discussion, the team began to rotate the order of classes. Each month, the arrangement was modified. In September students might attend math first, language arts second, then science, followed by social studies. In October they would begin with language arts, followed by science, social studies and math. The rotation continued each month of the school year.

This team found that students responded differently to their teaching depending on the time of the day. One teacher stated, "I know I am at my best early in the day. Students who routinely have me for class late in the day are not receiving the same experience as morning students. The ability to rotate the schedule allows us (the team) to better serve our students."

Since flexibility is an attitude, it is a concept that does not lend itself to implementation by administrative fiat. Two approaches lend themselves to successful implementation.

1. Work with faculty to develop a schedule that provides a structure and opportunities for flexibility.
2. Work with staff members to ensure utilization of the flexibility built into the schedule. Achieving the full potential of a flexible schedule is perhaps the greatest hurdle to implementation.

Many middle level schools have adopted a block schedule. It deviates from the traditional six or seven-period day in two distinct ways. First, it may lengthen individual class periods, thereby providing teachers with expanded class time. This time may then be used to provide a greater variety of instructional activities such as science labs or lengthy creative projects. The second impact is that as the school is organized into teaching teams, the team schedule is such that all its teachers share a common schedule, frequently with classes back-to-back. This provides the team with a longer "block" of time for their use.

The block schedule, however, is not the only approach to creating greater flexibility in a school's schedule. Three other approaches—alternate day schedules, rotating schedules, and dropped schedules—are used. Block schedules will be examined in this chapter and the other options will be discussed in detail in Chapter 5.

A Block Schedule

The most commonly used approach to providing flexibility in the middle level schedule is establishing blocks of time. This concept is closely linked to the establishment of interdisciplinary teams, i.e., two or more teachers who share students. A team may or may not have a similar schedule, however, providing all teachers on a team with the same schedule provides opportunities to increase the flexibility of the instructional program.

The example of one team in a southern middle school illustrates this example. The team consists of four eighth grade teachers: language arts; mathematics; science; and social studies. The team is scheduled with its students during first and second hour, and fifth and sixth hour each day. Each class period is 45 minutes in length, which provides this team with two blocks of time—one in the morning and one in the afternoon—that are each 90 minutes in length.

Class Period
1 BLOCK
2 BLOCK
3
4
5 BLOCK
6 BLOCK
7

Many different models provide blocks of time for teachers. While there is no conclusive evidence about the relative advantages and disadvantages of two, three, or four-period blocks, building a schedule that provides blocks of time facilitates the work of teams in adjusting their instructional program to respond more effectively to students. The schedule, by itself, does not ensure greater flexibility or instructional change. It does, however, establish the opportunity for teachers to modify their practice. When a block schedule is in place, teachers and teams are able to use a greater range of organizational and instructional practices to serve students.

One note of caution: Establishing blocks of time does not ensure that teams will use the flexibility inherent in such a model. However, without the structure that provides the blocks, it is nearly impossible for a teaching team to adjust their time use.

Advantages and Disadvantages of Block Time. As with any instructional practice, there are both pros and cons to providing flexibility in the schedule. The relative strength of the rationale will be influenced by the administrators', teachers', and students' role in the middle level school, and their beliefs about middle level education.

Administrators. Flexible scheduling can both enhance the development of a middle level program and provide an additional burden. For an administrator, the schedule is a visible indicator of the priorities and goals of the middle level school. The flexibility of that schedule provides a structure in which the middle level teacher may refine and enhance their instructional practices in response to students' needs.

The block-time schedule also simplifies the scheduling process. Once a student is assigned to a team with allotted blocks of time for instruction, the team assumes the responsibility for detailing the use of that time. The administrator, however, must ensure that there are no irresolvable conflicts among the various team blocks.

For the most part, the advantages of the block-time schedule rest on philosophical and programmatic grounds. Implementation of a block-time schedule complicates the scheduling of itinerant staff, use of part-time staff, scheduling of pull-out programs, and the lunch hour. These factors are hurdles common to the construction of nearly all schedules.

Administrators may also encounter resistance from opponents of a flexible schedule who raise concerns about protecting academic time, time for specific content areas, and preparing students for the structure of the high school day.

The conflict is related to the school's mission. On the one hand is the need to ensure that middle level students receive a challenging, enriching, and intense academic program. On the other is the desire to ensure that adolescents receive instruction in an environment that is responsive to their developmental needs and reflective of the variables that promote increased student achievement.

Open dialogue among staff members and administrators enhances the school's ability to ensure a common vision for the students in the middle level program. A flexible schedule can provide a challenging academic program and be responsive to students.

Teachers. The primary responsibility for implementing a block-time schedule rests with the teachers because once the master schedule provides options for flexibility, the teachers must use the options available.

In addition to responding to student developmental needs, the flexible schedule provides several advantages for teachers. The flexible schedule:

- Permits variation in length of time allotted to individual subjects based on teacher and student need
- Allows teachers and students to teach and learn according to their learning style preference for morning or afternoon
- Provides options for scheduling special activities such as assemblies, team meetings, or field trips, while permitting each student to meet with each teacher during the day
- Provides opportunities to group and regroup students without totally reorganizing classes or tracking
- Provides options for team teachers to correlate subject matter and engage in interdisciplinary instruction
- Permits the instructional staff to organize students to provide both large and small-group instruction.

One of the disadvantages of flexible scheduling is that it is not easily understood, especially by new students, parents, and substitute teachers.

On a flexible schedule, team teachers must share the same block of time to meet, talk, and plan together. Successful utilization of a flexible schedule requires commitment to collaborative planning. Some teachers view team planning as detracting from their own individual planning time. Continued discussion of this issue most often leads to resolution.

Another perceived disadvantage of flexible scheduling is the perception that teaming and block-of-time scheduling detract from a teacher's freedom of action. Conflicts between teachers may arise regarding the use of time. Implementing a flexible schedule requires that teachers have cooperative planning skills.

Some teachers may be reluctant to endorse a flexible scheduling option due to their unfamiliarity with the concept or their own insecurity about change. Open discussion of the issues, including the articulation of specific scheduling models, often helps them overcome much of this anxiety.

Students. Flexible scheduling provides middle level students with many of the advantages and disadvantages mentioned for administrators and teachers.

As the schedule and instructional practices become increasingly responsive to the developmental needs of students, the opportunity for students to reach their full potential increases. Correlating content across subject matter line, grouping and regrouping students for instruction, adjusting the time allotment for content areas, facilitating the scheduling of assemblies and special activities, and modifying the routine of the day all enhance student achievement and a student's sense of efficacy.

Block-Time Models

Block-time schedules come in many variations, each developed based on local resources and guidelines. The following examples address many of the issues associated with a flexible schedule. Each has advantages and disadvantages and should be examined for their approaches to the use of time. None are ideal—they merely offer ideas that can be adapted to meet the needs of local schools.

Example 1 Description: This model comes from a middle school that has three small units or houses—each a grade. House A is composed of sixth graders, house B of seventh graders, and house C of eighth graders.

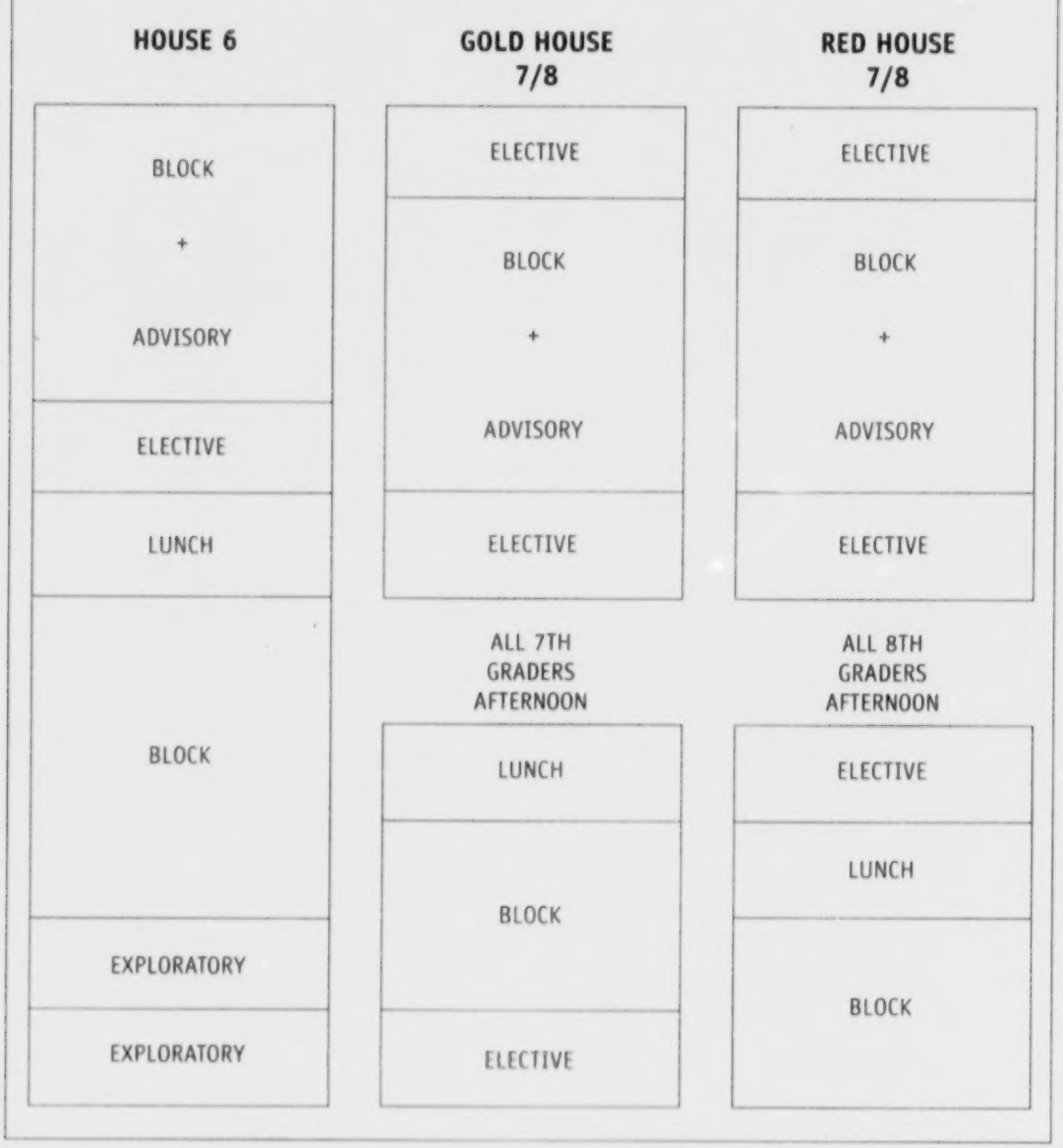
This schedule provides academic blocks throughout the school day. While most blocks are at least two class hours in length, it is necessary to have blocks of shorter duration for one group of students. The schedule has been structured to provide an advisory period at the beginning of the day that permits students to begin their day with their adviser to ensure the adviser has an opportunity to gauge how students are doing as they enter the school.

Example 1: Block Schedule

A	B	C
ADVISORY	ADVISORY	ADVISORY
BLOCK	ELECTIVE	BLOCK
ELECTIVE	BLOCK	ELECTIVE
LUNCH	ELECTIVE	BLOCK
BLOCK	LUNCH	ELECTIVE
EXPLORATORY	BLOCK	ELECTIVE
EXPLORATORY	ELECTIVE	LUNCH
		BLOCK

The location of the blocks provides opportunity for cross-graded electives and core courses. Electives can be shared between students in groups B and C, while students may be grouped between and among the three groups for block classes. This creates opportunities for the flexible advancement of students, and for some grouping and regrouping of students for instruction.

Example 2: Modified Block Schedule



Example 2 Description: This example is from a Michigan middle level school also composed of three small houses. One house includes all sixth graders, while the other two houses have both seventh and eighth graders. This schedule possesses many of the advantages described for the first example: blocks throughout the school day, opportunities for cross-graded electives and core classes, and the potential for flexible grouping and regrouping of students.

This schedule, however, is structured so all seventh graders have the same afternoon schedule. All eighth graders also have a common schedule. This variation on the schedule provides greater opportunity for scheduling classes offered for only one grade. It also permits students to eat lunch with their grade level group, an important consideration at this school.

Example 3: Exploratory Block

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Art	Home Economics	Technology Education	Drama
Exploratory Foreign Language		Computers	Music Appreciation

Example 3 Description: The block schedule is often used only with core academic classes. Due to a number of factors like shared teachers, part-time teachers, lack of classrooms, exploratory classes are not part of a block. This schedule overcame that barrier by scheduling sixth grade exploratory classes during two consecutive class periods. Students rotate through these classes during the school year. For example, students who are in art during the first quarter have home economics during the second quarter, technology education during the third quarter, and drama for the fourth quarter. While that is a common pattern, this school placed the same student groups together for both hours. This resulted in students who had art and home economics one hour being scheduled into exploratory foreign language the second hour. Students in technology education also took computers.

This permitted exploratory teachers to share students and provide a schedule that meets some of the criteria for teaming. Teachers were able to correlate curriculum across the content areas and develop common practices and procedures for all exploratory classes.

Another benefit of this schedule was that it allowed the exploratory team—either the entire group, or a subset such as drama and general music—to treat the two hours as a block-of-time and to adjust the length of the classes to meet the needs of students or the needs of the curriculum.

Example 4: Parallel Block Schedule

Grade 6

	1	2	3	4	5	6
R/LA/SS	A	A	C	C	EXPLORATORY	EXPLORATORY
R/LA/SS	B	B	D	D		
M/S/H	C	C	A	A		
M/S/H	D	D	B	B		

Grade 7

	1	2	3	4	5	6
LA/SS	A	A	EXPLORATORY	EXPLORATORY	C	C
LA/SS	B	B			D	D
Math	C	C			A	B
Science	D	D			B	A

Grade 8

	1	2	3	4	5	6
Language Arts	EXPLORATORY	EXPLORATORY	A	B	C	D
Social Studies			B	A	D	C
Mathematics			C	D	A	B
Science			D	C	B	A

Example 4 Description: This derivation of the block schedule offers expanded blocks for teachers. In the sixth grade, two teachers are responsible for reading, language arts, and social studies. Two others teach math, science, and health. The four groups of students (A, B, C, D) rotate between teachers. No group has more than two teachers.

Its schedule provides several advantages for teachers and students. Each block is the equivalent of two class periods, thus allowing flexibility in curricular and instructional activities. Additionally, teachers share students, thus permitting teaming and the ability to collaborate and work on interdisciplinary activities. Since the two teams have a "parallel" schedule, it is also possible to group and regroup students, as appropriate, between the two teams. This affords the teachers another way to meet the needs of their students.

At the seventh and eighth grade, similar benefits are available. Although students deal with more teachers and greater content specialization, the structure of the schedule permits teaming and interdisciplinary activity.

Summary

One model for scheduling the middle level school is to establish a block schedule. In response to local conditions, a variety of block-time models have emerged. Each is tailored to fit the needs of an individual school. Together, however, the models offer insights into the impact that a block-schedule can have on the instructional program.

There are other ways to modify the schedule to achieve some of the same goals. They include alternating day schedules, dropped schedules, and rotating schedules. Each will be discussed in greater detail in Chapter 5.

Alternate Day, Rotating, and Dropped Schedules

As middle level schools adopt an instructional model built around interdisciplinary teams, the concept of blocks-of-time is often used to provide flexibility. However, other models also provide flexibility, including the use of alternate day schedules, rotating schedules, and dropped schedules.

Alternate Day Classes

The use of alternate day classes permits students to attend more classes than there are class periods. For example, students might be scheduled for both physical education and foreign language during the same class period. The two courses meet on alternate days throughout the school year.

The alternate day scheduling pattern permits teachers in two content areas to correlate their subject matter, group or regroup students for specific instruction, and combine classes for particular activities.

Other alternate day rotations may include art and chorus, foreign language and performing arts, or technology education and computers. The combinations are limitless.

Alternating classes can also be combined with the use of academic blocks to provide yet another option for flexibility. A Missouri middle school illustrates the potential. Eight academic blocks were established, each approximately 85 minutes in length. Four blocks met one day, the other four blocks the next day. This arrangement alternated throughout the academic year so that on any given day a student had only four classes. The minutes of instruction were unchanged, but the nature of the instructional experience was dramatically altered.

Example 5: Alternating Day Block

Time / Day	Monday	Tuesday	Wednesday	Thursday	Friday
7:45 – 8:10	Advisory	Advisory	Advisory	Advisory	Advisory
8:14 – 9:40	1	5	1	5	1
9:44 – 11:10	2	6	2	6	2
11:14 – 1:10	3	7	3	7	3
1:14 – 2:40	4	8	4	8	4

NOTE: Lunch periods are scheduled during third and seventh blocks

Week Two – Blocks 1–4 meet Tuesday and Thursday
Blocks 5–8 meet on Monday, Wednesday, Friday

BEST COPY AVAILABLE

Example 5: Description: This schedule combines two approaches—block and alternating—to provide flexibility. It is a model that can be used independent of teaming to create longer instructional periods. This Missouri middle school created eight instructional periods and chose to schedule only four classes each day. In the example, periods 1, 2, 3, and 4 meet on Monday, Wednesday and Friday while classes 5, 6, 7, and 8 meet on Tuesdays and Thursdays. This arrangement alternates from week to week so that during any two week period a class will meet five times.

The model has the advantages associated with the block—longer periods of time, opportunity for a greater range of instructional practices—but has others as well. Teachers prepare for a limited number of classes each day and when they have planning time it too is lengthy. The major disadvantage is that classes do not meet every day and this may be perceived as a problem in subject areas such as music and foreign language.

Example 6: Alternating Schedule

Week One

Monday	Tuesday	Wednesday	Thursday	Friday
1	1	1	1	1
2	2	2	2	2
3 - M	3 - T	3 - M	3 - T	3 - M
4	4	4	4	4
5 - M	5 - T	5 - M	5 - T	5 - M
6	6	6	6	6

Week Two – During third and fifth period, "M" classes meet on Tuesday and Thursday and "T" classes meet on Monday, Wednesday, and Friday.

Example 6 Description: This model is a traditional six-period schedule and does not depend on the presence of teaming to provide flexibility. During third and fifth periods students are scheduled into two classes—one "M" and one "T." For example, physical education and health are required of all seventh graders. To ensure that students participate in some form of physical activity throughout the entire year the courses alternate—one on "M" days and the other on "T" days. Similarly, two other classes alternate during the other period.

This schedule allows a student to participate in eight classes during the six-period day. It does, however, have disadvantages, particularly remembering whether it is an "M" day or a "T" day.

BEST COPY AVAILABLE

Rotating Schedules

An advantage of block-time scheduling is the ability to rotate classes within the block so students and teachers can work together at various times during the day. The rotation of content areas within the interdisciplinary team is one example of a rotating schedule.

The entire school's schedule can be rotated. Such a rotation provides opportunities for every student and teacher to benefit, although such a rotation also poses some logistical problems related to use of itinerant and part-time staff. As shown in Example 7, the schedule rotates daily. Thus, the day begins and ends at a different point in the rotation.

Example 7 Description: This scheduling model is used in a Texas middle level school. The school has an eight-period day with one of the periods serving as a combination lunch period and study hall. This school utilizes a variation of the rotating schedule that schedules individual courses at different periods in the day depending on the day of the week. Third, fourth, and fifth periods are held constant. Third period is used for attendance for state reporting purposes, while fourth and fifth periods are designed for lunch periods.

Example 7: Rotating Schedule

Monday		Tuesday		Wednesday		Thursday		Friday
1		7		6		5		2
2		1		7		6		3
3		2		1		7		4
4		3		2		1		5
5		4		3		2		6
6		5		4		3		7
7		6		5		4		1

Such a schedule permits teachers and students to work together at different times during the day. This rotating schedule ensures that sometime during the week, students will be in a class early in the day or late in the day, allowing students and staff members to gain an enhanced perspective about each other.

For example, the student who may be inattentive and disengaged at the end of the day may be enthusiastic and involved in the morning. Likewise, teachers who are at their best in the morning will be permitted to work with all students during their prime time.

In addition, the rotating schedule ensures that disruptions that routinely occur in one part of the day, such as the late arrival of buses or early dismissal for sporting events, will not always affect the same class.

This concept may be enhanced when the concept of a rotating schedule is combined with the block-time concept for teams (see Example 8). For example, assume that the team has block time for four class periods: first, second, fifth, and sixth. Impose the blocks on the rotating schedule and the blocks rotate throughout the day.

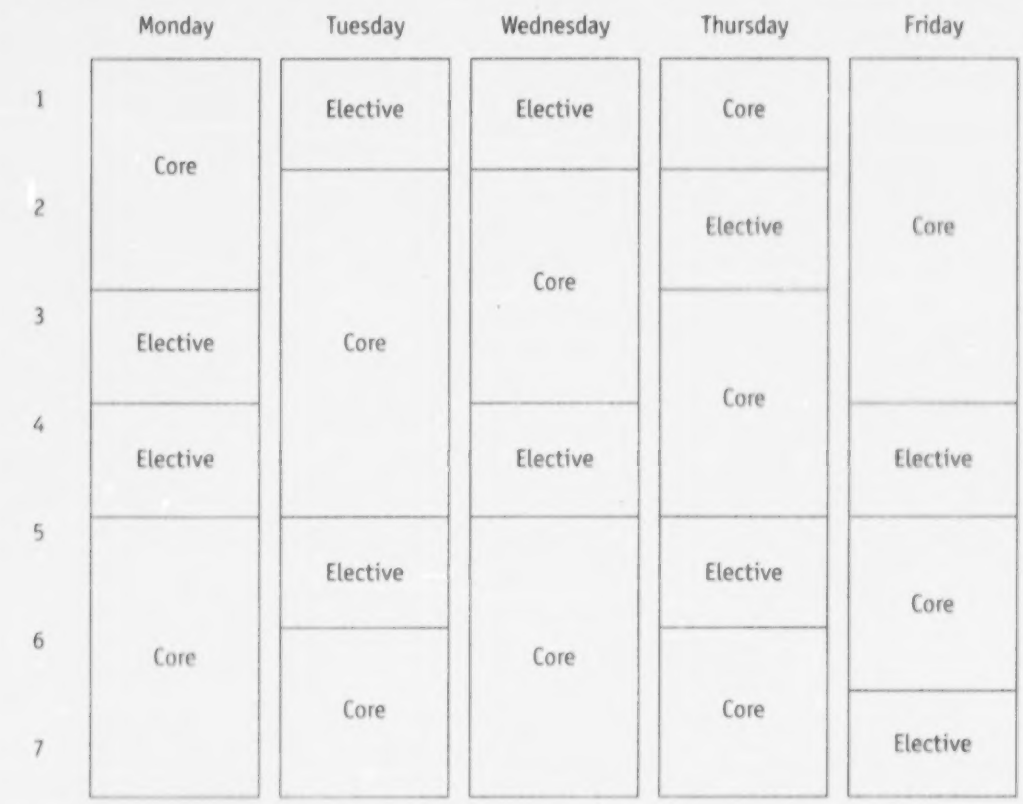
The nature of the rotation and the length of the blocks affect the structure of the day or both teachers and students. Some blocks will be longer, some shorter; some will be in the morning, others in the afternoon. Combining the two concepts maximizes the potential for flexibility in the schedule. However, the schedule may become too flexible, too variable, and resistance to the model may supersede the commitment to flexibility.

Example 8: Rotating Block-Time Schedule

Monday	Tuesday	Wednesday	Thursday	Friday
1	7	6	5	2
2	1	7	6	3
3	2	1	7	4
4	3	2	1	5
5	4	3	2	6
6	5	4	3	7
7	6	5	4	1

BEST COPY AVAILABLE

Example 9: Rotating Schedule with Block



Example 9 Description: Every day of the week is different from every other day, both in the location of courses and the length of the blocks of time provided for core teams. The school has a seven-period day and lunch is scheduled either between third and fourth period or between fourth and fifth period. The illustrated schedule is for only one of the grades in the school.

The core subjects of mathematics, language arts, science, and social studies are taught by a team of teachers who have a common schedule. The instructional blocks of time provided for this team vary both in length and in placement during the day.

On Monday, the team has a two-period block in the morning and a three-period block in the afternoon; on Tuesday there is a three-period block in the morning and a two-period block in the afternoon. On Thursday the team has two, two-period blocks—one morning and one afternoon—and a single class period early in the day. This provides the team with great flexibility in arranging their instructional periods and many options for grouping and regrouping students.

The elective courses are also scheduled at various times during the school day. When the schedules for all three grades are developed, it is possible to align certain periods to ensure that students participating in performing music and other courses can be assembled for ensembles and other groups without disrupting the remainder of the schedule. A major disadvantage of this scheduling model is the complexity of scheduling if staff members are shared between and among schools, which is often the case for teachers of elective courses.

This model provides a great deal of flexibility in the day. However, it also requires substantial commitment from the teaching staff. The model challenges all the attributes of conventional middle level schedules—classes of a standard length located in a fixed time slot each day of the week.

Dropped Schedules

This scheduling concept is built on the premise that not every course needs to meet every day of the week. Students may be scheduled for more classes than there are class periods. On any given day, one of the courses will be dropped. The following examples illustrate the approach.

Example 10: Rotating Dropped Schedule

Monday	Tuesday	Wednesday	Thursday	Friday
1	8	1	1	1
2	2	2	2	2
3	3	8	3	3
4	4	4	8	4
5	5	5	5	8
6	6	6	6	6
7	7	7	7	7

Example 10 Description: In this example, every student has eight classes, but only seven meet on any day. One class is dropped in order to add the eighth class.

This option is used at some schools to provide a scheduling alternative for the advisory program, sustained silent reading, assemblies or special activities, study skills instruction, or other local options. It can provide scheduling flexibility regardless of the presence of interdisciplinary teams.

Example 11 Description: This schedule from a middle level school in western Michigan provides great variety in the daily schedule. Some of the core classes—social studies, science, communications, physical education, and unified arts—meet four days each week. This allows the scheduling of mini-courses.

Each Monday is a base day: mini-courses are not offered. Tuesday has the same schedule as Monday, except mini-courses are offered in place of the seventh hour class.

On Wednesday, the rotating schedule takes effect. The seventh period class dropped on Tuesday is taught first period on Wednesday, with the first period class taught second period, the second period class taught third period, etc. On Wednesday, the seventh period class is dropped for mini-courses and taught first period on Thursday.

Performing music and basic skills are offered every day—second period for sixth grade, third period for seventh grade, and fourth period for eighth grade. This part of the schedule is not affected by the rotating schedule.

Example 11: Dropped Schedule

6th Grade

	1	2	3	4	5	6	7
Mon	M		U	SS	S	P	LA
Tue	M		U	SS	S	P	MC
Wed	LA		M	U	SS	S	MC
Thur	P		LA	M	U	SS	MC
Fri	S		P	LA	M	U	MC

7th Grade

	1	2	3	4	5	6	7
Mon	M	U		SS	S	P	LA
Tue	M	U		SS	S	P	MC
Wed	LA	M		U	SS	S	MC
Thur	P	LA		M	U	SS	MC
Fri	S	P		LA	M	U	MC

8th Grade

	1	2	3	4	5	6	7
Mon	M	U	SS		S	P	LA
Tue	M	U	SS		S	P	MC
Wed	LA	M	U		SS	S	MC
Thur	P	LA	M		U	SS	MC
Fri	S	P	LA		M	U	MC

COURSE	
LA	Language Arts
M	Mathematics
MC	Mini-Courses
P	Physical Education
S	Science
SS	Social Studies
U	Unified Arts (Art, HE, Music Lab, Technology)

Example 12: Dropped Schedule with Advisory

Monday	Tuesday	Wednesday	Thursday	Friday
10 minute advisory				
1	**Advisory**	1	1	1
2	2	2	2	2
3	3	3	**Advisory**	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7

Example 12 Description: This schedule is one other variation on the dropped schedule. In this school, a short advisory period—like a traditional homeroom period—is held at the beginning of each but other times during the week a class is dropped in order to provide a longer class period for advisory activities. The classes to be dropped vary from week to week so that the impact is not always felt in the same content areas.

Other schools use this model for activities other than advisory. Because of the need to bus most of its students one Texas school schedules student clubs and other activities during the day using a rotating schedule. A northeastern school holds mini-courses during such a period. The variations are endless.

Summary

Ensuring flexibility in the instructional day is a worthy goal for the middle level school, as it illustrates sensitivity and responsiveness to the developmental needs of middle level students.

Implementing a schedule that provides flexibility is not easy. It requires a discussion of the concept, the development of a foundation of rationale among the staff, and creative problem solving in addressing the logistical issues associated with creation of a schedule.

No one model for flexibility has greater advantages than any other. As with most aspects of the educational process, commitment and perseverance are the keys to success.

References

Epstein, Joyce, and Mac Iver, Douglas J. "National Practices and Trends in the Middle Grades." *Middle School Journal*, November 1990.

George, Paul, and Oldaker, Lynn. "A National Survey of Middle School Effectiveness." *Educational Leadership*, December 1985–January 1986.

Lounsbury, John H. "Less Is More in Middle School Scheduling." *Middle School Journal*, January 1981.

Mac Iver, Douglas J. "Meeting the Needs of Young Adolescents: Advisory Groups, Interdisciplinary Teams, and School Transition Programs." *Phi Delta Kappan*, February 1990.

Merenbloom, Elliot Y. *The Team Process: A Handbook for Teachers*. Columbus, Ohio: National Middle School Association, 1991.

Williamson, Ronald, and Johnston, J. Howard. *Planning for Success: Successful Implementation of Middle Level Reorganization*. Reston, Va.: National Association of Secondary School Principals, 1991.

Getting Started

A variety of scheduling options provide degrees of flexibility in the school day. Previous chapters discussed those options—block, alternating, rotating, and dropped.

Selecting an approach requires consideration of several factors: program goals; local parameters; and the advantages and disadvantages of the varied models. In a study conducted during the past three years, 100 middle level principals were asked to rate the merits of the four scheduling options discussed in this book, along with the traditional departmentalized approach. Principals first identified the primary reasons for adopting a flexible schedule. Then, each option was rated on a scale of one to three, with three being the highest, for their ability to achieve these goals. The results of their ratings appear in Figure 1.

Overall the block schedule, in its many variations, received higher ratings from the principals about its ability to achieve the desired outcomes. The alternating schedule, and to some extent the rotating schedule, achieve some of the goals, primarily when connected to an instructional block. The other models, depending on the priorities of the school's program, may meet some needs.

When selecting an approach, it is critical that school leaders ensure an alignment with program goals. The schedule is a powerful tool that may be used to improve a school's ability to achieve its goals, or can serve as a significant barrier to their attainment.

Equally important is to identify and consider local issues that may limit the options, e.g., sharing music teachers with the high school. While such constraints are common, they should not become the determining factor in examining the use of time. They do, however, provide special challenges that must be studied and addressed as a school moves toward a more flexible schedule.

Figure 1: Impact of Scheduling Options

	Dept.	Block	Altern	Rotate	Drop
Teacher Empowerment					
Teachers can vary length of classes	1	3	3	2	1
Curricular/instructional decisions	3	3	3	3	3
Longer planning period	1	1	3	1	1
Curricular/Instructional Improvement					
Vary length of time	1	3	3	1	1
Schedule special activities	1	3	3	2	2
Large/small group instruction	1	3	3	2	1
Group/regroup students	1	3	3	2	1
Ease of interdisciplinary options	1	3	3	2	1
Some teachers must change techniques	1	3	3	2	1
Accommodates teams	1	3	3	2	1
Student Needs					
Improved climate	1	2	2	2	2
Time adjusted to needs of pupils	1	3	3	1	1
Have fewer teachers each day	1	1	3	1	2
Other Issues					
Ability to share teachers	3	3	1	1	3
Lack of confusion	3	2	2	2	2
Needs of special populations	3	2	2	2	3

Low — High

1 — 3

Planning Steps

Once student course selection is finished and staffing decisions made, the final steps can be taken to prepare the schedule. They include adjusting course selections, determining staff preferences, and creating advisory groups/teams.

Adjusting Course Selections. As a result of staffing decisions, it is likely that several planned courses will not be offered. Students who selected those classes will need to be scheduled into other options, and alternate selections placed in the data file if a data system is used for scheduling.

These changes will result in modified tallies for each course, so administrators should verify that sufficient sections of each course will be available.

Determining Staff Preferences. Many principals find it useful to invite staff members to indicate any preferences they may have for the coming year's assignment. In districts with collective bargaining, it may be required under the provisions of the teachers' contract. In all cases, this information allows the staff members to be involved in determining their assignments and often improves school climate.

Forming Student Groups. In schools with an advisory program and/or interdisciplinary teams, one of the most complicated, yet most critical activities, is the formation of student groups. The development of these groups is an essential component of implementing the basic mission of the middle level school and is a visible expression of the school's philosophy.

Establishing student groups early in the scheduling process is critical, as it will both ease and simplify subsequent tasks. The school's criteria for placement of students must be available and well-articulated. Most schools have an established process that includes the criteria to be used for forming groups (e.g., gender balance, feeder school patterns, achievement level).

The goal should be to create advisory or team groupings that are heterogeneous and closely approximate the student population of that grade. However, the policy in some districts—and the law in some states—requires that some classes be grouped based on student achievement levels—usually for special populations (e.g., special education or gifted and talented). In such cases, these requirements serve as another factor in preparing the student groups.

Once the required information is available, one may begin to form student groups. Some data systems provide an option for arranging these groups. Most often, this is a manual process that allows greater flexibility and responsiveness. Regardless of the grouping process, several steps may be followed to ease the process.

Once the number of groups has been determined, the administrator should determine the number of students in each group based on the various criteria (ethnic, gender, skill level, special needs, feeder schools, etc.). One method is illustrated in Figure 2. This form provides a handy reference for ensuring that the classroom groups are balanced based on the agreed-upon criteria.

Figure 2: Classroom Grouping

Student Name	Special M/F	Feeder Ethnic	Ach. Needs	School	Level	Comments

Computer or No Computer

Administrators often have a choice about whether or not to use a computer to assist with scheduling. Options include using a manual system, participating in a district or consortium data system, or utilizing a microcomputer. Even within these options, there are additional considerations. For example, the administrator may use a computer to build the schedule or manually build the schedule, and then use the computer to schedule students.

There are advantages and disadvantages to all scheduling methods. The key consideration is the degree of control the administrator wants over the final product. It is always important to focus on developing a schedule that facilitates the instructional program and enhances the ability of students to take the courses they want.

Perhaps the most common scheduling system is the combination of a manual system with the advantages of a data system. For example, a computer system may be used to tabulate and generate data about student course selections. The administrator can manually create the schedule, then use the computer to place students into classes by simulating student schedules. The administrator, once satisfied with the schedule, may use the computer to generate student schedules, class lists, and other reports.

Before selecting a computer software system, administrators should consider several key questions. These questions, published by the Michigan Association of Secondary School Principals, are included in Appendix B. The list was developed by Robert Schramke, principal of Redford (Mich.) Union High School.

Regardless of the system selected, there are several common elements in preparing the schedule:

1. Determining any curricular or instructional parameters or guidelines such as grouping practices or teaming arrangements

2. Preparing materials and establishing timelines
3. Gathering information from students
4. Determining staff needs
5. Building the schedule
6. Refining the schedule.

In most software packages, one of the most difficult tasks is scheduling students onto teams with blocks of time without the computer totally confusing the composition of the student groups.

One strategy is to utilize the strength of the computer process by creating a series of special course numbers or singleton courses to force the computer to maintain the integrity of the student groups. These numbers are used for no purpose other than to schedule all students on a team with the same group of teachers. The use of singleton course numbers ensures that each course, or group of students, is unique. Figure 3 provides an example of this process.

Each team is assigned the special numbers for the classes that all students attend. In the example, those classes are language arts, mathematics, science, and social studies.

The next step is critical if a data system is being utilized. All students in the group must have their selections changed from the course numbers on the data system to the special numbers being used. Once the special numbers are entered, the administrator uses them to build the master schedule on the data system. This allows only students on a particular team to be assigned to the sections of courses taught by the team teachers.

Once the data are entered, the administrator may request a listing of students sorted on particular team course numbers. This provides a list of each team class and allows the administrator to verify student placement. It also facilitates any adjustments that may be needed to ensure balance across teams and/or advisory groups.

Remember that the data system will assign students to classes based on the information in the computer file. If the data are not correct, students will not be placed in the classes they desire.

Figure 3: Seventh Grade Team

A team of four teachers (language arts, math, science, and social studies) working with four groups of students

Group	Course	Special Course Numbers
Student Group A:	Language Arts	141
	Mathematics	341
	Science	441
	Social Studies	241
Student Group B:	Language Arts	142
	Mathematics	342
	Science	442
	Social Studies	242

Group	Course	Special Course Numbers
Student Group C:	Language Arts	143
	Mathematics	343
	Science	443
	Social Studies	243
Student Group D:	Language Arts	144
	Mathematics	344
	Science	444
	Social Studies	244

If Blocks—Where Do They Go?

If a determination has been made to use a block-time model, several variables must be considered when constructing the schedule and locating the placement of the blocks:

- Length of individual blocks
- Number of teams scheduled for blocks
- Room availability
- Lunch schedules
- Teacher workload constraints
- Elective course offerings
- Singleton courses available to students in more than one grade.

To assist with this planning, it might be useful to consider a format similar to that in Figure 4. This chart serves as a planning document, showing placement of individual blocks on the schedule, identifying when certain courses must be scheduled, and noting critical issues to be resolved. This visual look at a schedule—location of blocks, and the way in which they interrelate—helps to highlight adjustments that must be made.

The example in Figure 4, from a middle school in southwestern Michigan, included blocks for all three grades. Morning and afternoon blocks were built for all grades. During second period, all grades are in academic blocks, thus permitting all elective teachers to have common planning. In many schools, such a schedule would not be possible due to insufficient classrooms.

The example notes when selected singleton courses—those meeting only once during the day—will be offered. Seventh and eighth grade band must be fourth hour when neither grade is in the block; and first year foreign language, available only to eighth graders, must be either third or fifth hour when eighth graders are in electives. Foreign language should not be scheduled during fourth hour due to the high probability that students in foreign language will also be in band.

Figure 4: Orchard View Middle School

	Sixth	Seventh	Eighth
1	Block		Block
2	Block	Block	Block
3		Block	
4	Block		
5	Block	Block	
6		Block	Block
7			Block

Course	Hour	Common Planning	Time	Issues To Be Reserved
Band 7 & 8	4	All 6th Acad. Staff	3, 6	Lunch Schedules
For. Language	3 or 5	All 7th Acad. Staff	1, 4	Exploratory Rotation
		All 8th Acad. Staff	4, 5	
		Elective	2	

This example illustrates the benefits of preliminary planning. The identification of appropriate times for blocks, their location, and the potential conflicts will assist in developing a successful schedule.

Simulations

After developing a preliminary schedule—establishing school priorities, delineating staffing levels, gathering information from and about students and staff members—a simulation can be used to determine the probability that the schedule will meet its goals. Scheduling simulations will occasionally be done on paper, more commonly using computer assistance. They are helpful in determining the location of blocks-of-time for teams and the placement of courses offered in a particular curricular area.

The simulation process often permits review of individual pieces of the schedule without finalizing the entire schedule. Such a process provides insights that help smooth later steps in the scheduling process.

During this phase of scheduling it is also useful to develop a clear idea of the specific staff assignments. For example, Teacher A may teach three sections of world geography, two sections of language arts, and be a teacher adviser. Teacher B may be assigned two classes in communication skills, one class in beginning theater, and two classes of performing arts.

Detailing the assignment of each staff member provides the scheduler with a picture of the way each assignment will be structured. It also clarifies staffing needs.

It is best not to notify teachers of their specific assignment prior to constructing the actual master schedule. As the schedule evolves, it may be necessary to adjust specific staff assignments so that a greater number of students may access the classes they elected. Early notification, while always beneficial, may reduce some of the flexibility available to schedulers and impede development of a sound schedule.

Building the Schedule

Before building the schedule, administrators should consider several factors that affect the process:

- Program issues
- Teaming arrangements
- Physical space
- The schedule of part-time teachers
- Common planning time needs
- Lunch considerations and the impact on classes that include students from more than one grade
- Teaching stations in such areas as music, home economics, art, and technology education
- Contractual limits on the number of preparations and assignments.

An examination of three of these factors will provide insights into their specific impact on development of a school schedule.

Program Issues. Several factors are involved in this component, including grouping (heterogeneous or homogeneous), course requirements, support programs such as special education, Chapter 1, and English as a second language; and contractual issues related to teacher workload.

Teaming Arrangements. Teaming is closely related to the concept of flexible scheduling that it is essential to consider the structure of a school's teaming program. Issues such as the size of teams, the length of blocks, grouping issues, teacher certification, common planning time, and a common block of instructional time must be addressed.

Physical Space. The physical layout of the school will affect both the nature of the program and the structure of the schedule. For example:

- Is it possible for team members to be located in adjacent classrooms?
- Does the departmental structure of the school lend itself to a teaming arrangement?
- Do staff members have a vested interest in maintaining their classrooms in certain locations within the school?
- Is the school building large enough to provide both large group and small group instructional space?
- Are there adequate facilities for team planning?

Either on paper, a magnetic board, chalkboard, or other device, the administrator should begin to place individual sections of classes into the schedule. This permits early adjustment of courses to avoid later conflicts.

Singletons and Doubletons

Administrators must consider the location of singletons and doubletons. Singletons are courses that meet only once during the school day; doubletons meet twice. These courses may conflict with many other courses because there are only one or two opportunities for a student to take each course. If a student elects to take two singleton courses—and those courses are scheduled during the same class period—a conflict will arise that must be resolved.

Avoid conflicts when the schedule is initially developed. For example, if it is probable that students taking band and orchestra will also take foreign language, scheduling these two classes during the same period will likely create conflicts. However, scheduling French 1 and Spanish 1 during the same period would have few if any conflicts, since few students would elect more than one foreign language.

If a data system is utilized for scheduling, a conflict matrix report will be useful in identifying the potential conflicts between singleton and doubleton courses.

When using a manual scheduling system, it is also important to gather data regarding potential conflicts. These data can be tallied by reviewing student course selection sheets and tabulating the number of students electing certain other courses. Limiting the number of courses reviewed will simplify the process.

Building the Specifics. After tentatively placing every section of every course into the schedule, the scheduler should review each class hour to ensure balance in the variety of classes offered and the varied skill level of courses, and to ensure that a sufficient number of sections are available to accommodate the students in each grade. Attention to these details at this stage will preclude major restructuring of the schedule later.

Once comfortable with the specifics of the schedule, details can be placed in the data system, including entering each individual section into the system. All the necessary detail about each class, such as room numbers and section codes, must be included. It is easy to defer assigning these data until a later date, but the further along the process, the more difficult it becomes to adjust courses and rooms.

Staffing Decisions. Staffing is one of the most important tasks associated with scheduling. The staffing process determines the courses offered, the number of sections of each course available, and the size of the staff and the number of students in each class. Because of the critical impact of staffing, it is important to take special care to ensure the administrator plans carefully and follows procedural steps. Several important activities are vital in preparing for staffing decisions:

- Gathering information about staffing needs
- Inquiring about staff preferences
- Establishing a timeline
- Generating staffing alternatives
- Selecting and placing staff.

The key to successful staffing is gathering and organizing the information required for presentation to the personnel office. One important variable is student course selection. This selection should be finalized prior to making staffing decisions.

In many districts, the actual number of students electing a class is used to determine staffing levels. Therefore, courses should be selected for those students who have not indicated their enrollment for the following year, or have not returned the course selection forms. This will ensure an allocation of staff to compensate for students who have not yet made selections.

While the procedure for allocating staff members varies among districts, the process generally involves the administrator meeting with a representative of the personnel office and the office of instruction to review building needs and anticipated staffing changes such as retirement, transfer, and leave. At this meeting or a subsequent session, the number of staff members allotted to the school will be determined.

It is important to establish a timeline for conducting this meeting and reaching agreement on staffing levels. It is often helpful for the middle level administrator to take the initiative and arrange for the meeting at an early date. Reaching an agreement about staffing decisions as early as possible allows more time to conduct the remainder of the scheduling activities before the end of the school year. This is particularly important if a goal of the scheduling process is to notify staff members of their assignments before they leave for the summer recess.

To make staffing and scheduling decisions certain information must be readily available—lists of each course and the number of students electing the course. Most districts place some restrictions on course offerings. Most commonly a minimum number of students must select a course before it may be offered. Other limits include restrictions on the number of staff members in a content area or the limits imposed by teaching stations in specialized areas, such as technology education or art.

Once limits have been determined, it is important to review the information available to decide which courses will not be available. Students who selected these courses will need to be assigned to alternate classes. Adjusting selections will provide more accurate numbers on which to base staffing decisions.

Organizing the information required by the personnel office will make the staffing session more productive. Most likely, the number of sections for each course is determined by the personnel office at the staffing session; however, in every case, the school should request the number of sections that will provide for the needs of the students of that school.

Additional thought might be given to the specific assignments for individual staff members. One strategy is to list the specific assignment anticipated for each staff person. This permits the administrator to have a picture of staff use. It also helps identify any known vacancies or needs that may need to be discussed with the personnel office.

Figure 5: Staffing Proposal

Teacher A:	2—6th Grade Social Studies 4—6th Grade Language Arts	Teacher D:	3—Reading 3—8th Grade English
Teacher B:	3—7th Grade Math 3—7th Grade Science	Teacher E:	5—7th Grade Science 1—Science Coordinator
Teacher C:	4—6th Grade Physical Education 2—7th Grade Physical Education	Teacher F:	2—Computers 2—7th Grade Math 2—7th Grade Science

Selecting Staff Members

Teachers at the middle level are unique. They possess an irrepressible love of young adolescents, are sensitive to their changing development, and are committed to using instructional practices that are effective with early adolescents.

Middle level administrators are constantly in search of effective middle level teachers. J. Howard Johnston and Glenn Markle (1986) identified 18 "indicators of competency" in the behavior of middle level teachers. Based on extensive review of the literature, they determined that effective middle level teachers:

- Have a positive self-concept
- Demonstrate warmth
- Are optimistic
- Are enthusiastic
- Are flexible
- Are spontaneous
- Accept students
- Demonstrate awareness of developmental needs
- Demonstrate knowledge of subject matter
- Use a variety of instructional activities and materials
- Structure instruction

- Monitor learning
- Use concrete materials and focused learning strategies
- Ask varied questions
- Incorporate indirectness in teaching
- Incorporate "success-building" behavior in teaching
- Diagnose individual learning needs and prescribe individual instruction
- Listen.

These are desirable qualities in all teachers, but particularly important at the middle level, where students exhibit such a wide range of development.

The actual placement of staff members is one of the most important considerations in staffing the middle level school. In addition to state standards local districts often identify additional staffing requirements, such as teaching within majors or minors, transfer procedures, and seniority procedures.

Beyond these legal requirements, most middle level administrators consider other factors. The most important is ensuring that the staff members are selected and placed so the benefits to the curricular and instructional programs are maximized. At the middle level, consideration should be given to ensuring that teaching teams are balanced regarding teaching specialty and teaching style. First and foremost, however, the middle level teacher must enjoy the challenges and rewards of working with early adolescents.

Being responsive to the interests of staff members is also useful. While not always possible to place all staff members in the assignment of their choice, any school program is strengthened when there is a match between the teacher's strengths and skills and the assignment.

Disagreements will arise, but it is important to use good personnel practices in resolving the issues. Utilizing effective listening skills, working collaboratively toward the resolution of differences, and explaining reasons for decisions are important.

Summary

The final steps in scheduling are critical. Essential components of this planning include encouraging staff input, modifying student course selections to reflect actual courses being offered, and creating team and advisory groups.

After gathering a base of information, delineating scheduling parameters, and thinking about the nature of the schedule, constructing the schedule begins—placement of classes, teams, or other organizational items into a workable schedule.

Reference

Johnston, J. H., and Markle, G. C. *What Research Says to the Middle Level Practitioner.* Columbus, Ohio: National Middle School Association, 1986.

CHAPTER 7

Breaking the Mold

There are no perfect schedules. A middle level principal from Arizona once described his frustration, "Every year I'm real excited about the schedule. I'm sure we've solved all of our problems and will be able to do everything we desire. Somewhere in late spring it all collapses. We, once again, come face to face with the prospect that it won't all work."

These comments reflect the agony of working to make significant progress in modifying the schedule, only to discover that "it won't all work." This chapter discusses some of those frustrations and suggests steps that might be taken to ensure a greater likelihood that the schedule "will work."

Strategies for Manipulating the Schedule

Every student should be able to participate in every aspect of the school program. In reality, however, every schedule will include conflicts. The goal of most scheduling processes is to reduce the number of conflicts and to improve every year's schedule based on the experience of the previous year. Striking a balance between individual student needs and the need to reduce conflicts is at the heart of the scheduling task.

Perhaps the greatest variable affecting the middle level schedule is the length of the school day. Starting and ending times are generally regulated by transportation schedules and definitions of workload included in labor agreements. The number of minutes in each school day is finite. Therefore, the challenge confronting the middle level administrator is to manipulate those minutes to ensure a program that responds to students.

The following are strategies that may be used to address scheduling issue.

Challenge the Regularities. The middle level administrator may need to challenge some of the givens in a school day to build flexibility into the schedule.

- Do all classes need to meet every day?
- Do all class periods need to be of a uniform length?
- Does a school need to have class periods and bell schedules?
- Does every day need to have the same number of class periods?
- Does every teacher need to work with students from only a single grade?

The answers to these and other questions will determine the structure of the school schedule. For example, some courses may meet on an alternating day basis. Perhaps a school can use a drop schedule and schedule eight classes over a seven-period day. Using blocks of time will provide flexibility for teams to restructure instructional time. Bells may be a hindrance to the concept of blocks-of-time.

Focus on Students. The high school program often affects the middle level school. This may be due to transportation schedules, or the use of staff members shared between the two levels. If so, administrators may need to negotiate with the personnel office about the use of staff members, negotiate with the high school administrators regarding scheduling of staff members, or work with the central office to adjust transportation schedules.

Staff use is one of the critical variables in a master schedule. The administrator must be willing to convert existing teaching positions to a different use, review teacher certification and past experience to determine the flexibility of staff to assume modified positions, talk to staff members about taking a different role in the school, and discuss with the personnel office or the administrators of other schools the flexibility to trade teachers or convert vacancies into other positions.

Adjust Placement of Blocks. Be creative in manipulating the major variables of the school day. Perhaps varying the length of the blocks or adjusting their location in the day will facilitate the schedule. A block of three or four class periods may greatly enhance the instructional program and might be advantageous to students and teachers.

All teams within a given grade may not need to have the same schedule. To maintain team integrity, however, it is important that all team members have a similar schedule and common planning time. All teams may not require the same schedule. Such adjustments may enhance the ability to offer electives to students in more than one grade or to access the exploratory or elective program. However, such a shift might also hinder the schedule by inhibiting cross-team communication, requiring inappropriate grouping of students, or restricting student access to the full range of elective courses.

Value Collaboration. Involving staff members and students in schedule development can greatly expand the perspectives about the schedule and provide insights that will improve it. Guidance and clerical staff members often have valuable knowledge about the functioning of the schedule and its impact on students. For example, the guidance secretary will know which courses are creating conflicts for students based on student requests. The secretary will also have developed some thoughts about potential solutions to the conflicts. Tapping these resources will lead to the development of a solid schedule.

Students also have opinions about the impact of the schedule on their life. For example, at one middle school, students have three lunch periods. The lunch periods include students from all three grades at the school. Due to the structure of the teaching teams, students at any grade level have little opportunity to interact with other students at that same grade. This was an issue of major importance to the student body and one that could be addressed by modifying the schedule. Certainly, such attention to student needs promotes a climate of greater respect and builds support and ownership for the scheduling model.

Starting Small Is Okay. Many schools explore options to their traditional schedule and are immediately confronted by barriers that appear insurmountable. Rather than proceed, examining those aspects of the desired schedule that can be implemented, they retreat and abandon any initiatives out of frustration; others settle for less desirable alternatives out of similar frustration.

Most schools do not achieve all their goals when they transform their schedule. The goal is most often to provide teachers with greater flexibility in the use of time, thereby providing a tool that can be used for meeting the learning needs of students.

Settling for less than the ideal is all right. The story of one school in Ohio illustrates the issue. For some time the school had used a block schedule for sixth and seventh graders. After success

with this model they decided to expand the benefits to the eighth grade as well. They discovered that it was not possible, because of staffing levels, to provide each eighth grade team with blocks of similar length. Rather than abandon blocks altogether, they resolved to move ahead where they could make improvements. The two teams elected to alternate their schedule from year to year, one year having a lengthy block and the next year having a fragmented schedule.

Starting small, perhaps with only one team or one grade level can be a useful strategy for implementing a schedule change. The experience of these small groups can both inform further changes and provide a model for the rest of the school. A principal in Washington state described the positive spin his school placed on their initial effort: "We treated it like a pilot—a chance to try out the schedule and learn from it. We discovered students and teachers loved it. The rest of the staff ended up clamoring for a piece of the action."

Focus on Growth and Improvement. Schedules often become static and stagnant. Once developed, they perpetuate themselves from year to year. Dynamic middle level schools treat their schedule as a resource, one that can be shaped and molded to meet student and teacher needs. They are fearless in questioning accepted practices and suggesting alternatives.

Student needs change rapidly and schools must treat their schedules as a tool that may be used to respond to these changes. Altering the structure of the day, considering rotating classes, and examining the length of class periods are all strategies that can start a revitalization of the school's schedule.

There are no perfect schedules, but they can all be strengthened and improved.

Summary

Implementing a flexible schedule complicates the scheduling process. Selecting a model and determining implementation strategies can be a particular challenge. Middle level schedules can accomplish nearly anything; they just can't accomplish everything—particularly in the same schedule.

Analyzing the school schedule and adjusting the variables based on established priorities is the key to successful scheduling. Striving for flexibility and a structure that enhances student learning is a worthy effort—one that should be eagerly accepted.

APPENDIX A

The following memo was prepared by a Michigan middle level principal describing the considerations in developing a master schedule.

TO: Staff

DATE: April 12, 1990

RE: Master Schedule

Yesterday's discussion at staff meeting regarding the master schedule was cut short because some had to get to a 4:45 p.m. meeting. But there seems to be a great deal of interest in how the master schedule "comes together," and the parameters for developing the schedule. So, if anyone is interested, here are all of the parameters. They are listed in no particular order. If you want to have a go at it, please do. Let me know if you come up with anything we can consider.

TIME PARAMETERS

- Begin at 8:05 a.m., end at 2:45
- Twenty-five minute advisory
- Seven 45-minute classes
- Five-minute passing times
- Three lunch periods, 30 minutes portal to portal (from the time one class ends until the next begins)
- Twenty minutes between lunches

OTHER PARAMETERS

- Block time for academics
- Two orchestras must be scheduled back-to-back
- Seventh and eighth graders must have two common elective periods to accommodate singleton electives open to both grades
- Common planning time for teams
- Common planning time for electives
- No more than three sections of phys. ed. in any class period
- Foreign language does not meet at same time as music at the same grade level
- Sixth grade exploratory—12 sections equals three strands; must be back-to-back to accommodate shared teachers
- During exploratory hour all seventh and eighth graders must be in academics because all elective teachers are busy

- No seventh or eighth grade instrumental music can meet during sixth period because music teachers are scheduled for other classes
- Each hour there must be 617 seats available (221 for sixth, 206 for seventh, 190 for eighth)
- No teacher can teach more than 200 minutes in a row without a lunch break or planning time
- Part-time teachers, unless they are full-time in the district, must have their teaching assignments back-to-back since they do not receive planning time
- No more than two-thirds of the students may be in electives at any one time because there are not enough classes to accommodate them
- Be careful during lunch times; it's easy to overlook the fact that hours become staggered and assign teachers to overlapping classes
- If advisory is not at the beginning of the day, be careful where you put lunch
- Full-time teachers must have five assignments

I'm pretty sure those are all the things that have to be worked with. I hope I haven't missed any, because if any of you spend much time trying to draw up some skeleton master schedules only to find I've overlooked some critical element(s), you'll not be happy with me. Since I'm writing this at one o'clock in the morning, though, I can't promise I've thought of everything.

If you like puzzles, this task is for you. It's fun, actually—just very frustrating.

APPENDIX B

Factors To Consider in Selecting a Scheduling Program

Administrative Factors:

1. Can the program be accessed by counselors, secretaries, and administrators?
2. Can the computer generate its own forms for report cards?
3. Do you depend on the vendor for supplying you with report forms or report cards?
4. Are data stored in a form that a programmer in your building can easily retrieve and update?
5. Can data be imported/exported if you decide to change systems?
6. Can data be downloaded from your present system?
7. Is the system totally integrated (i.e., are attendance and grade reporting included at this time, or can they be added at a future date?)
8. Does the software have the ability to provide access for various input devices such as Scantron or a bar code system?
9. Is the system user-friendly?
10. Can people be trained and re-trained to operate the software?
11. Does it further the effort to make counseling paper-and-pencil-free prior to the first tally?
12. Is a security system built into the program?

Scheduling Functions:

1. Does the program have an automatic master schedule builder as part of the scheduling procedure?
2. Does the software have the capability to automatically schedule a new student when the student arrives at your school (auto scheduler)?
3. When a schedule is created for a new student, is a copy immediately available?
4. Can a student be manually scheduled?
5. Can students be globally scheduled for classes?
6. Can maximum and minimum class sizes be controlled/adjusted?
7. Can the program identify specific courses as a priority?
8. Can multiple hour classes be scheduled? Two-hour blocks? Three-hour blocks? Four-hour blocks?
9. Can the program handle less than semester classes, such as nine-week or trimester classes?

10. How long does it take to complete a schedule run?
11. Is room management possible?
12. Is it possible to link courses?
13. Can an updated master file be printed at any time?
14. Can schedules, attendance, and transcript records be viewed on a CRT at any time?
15. Print screen information?
16. Can a conflict matrix be generated for selected singleton, and doubleton courses?
17. Can pre-scheduling class lists be generated from the tally?

Hardware:

1. What type of hardware is required? Can scheduling software run on the current computer system and other future systems?
2. Does your hardware support the software system?
3. Will software run on all major operating systems, for example MS-DOS and UNIX?

Software Company:

1. How many schools/references are provided?
2. How long has the software company been in business?
3. How long has the company supported this particular program?
4. What kind of phone support do you have? (Can a modem be used to send problem data analysis?)
5. What is the length and type of training required?

Cost Factors:

1. What is the total cost of the system?
2. Does the support service cost more than 10–15 percent of the purchase price each year?
3. Is there a cost when the system is updated?

Reprinted with permission from:

Michigan Association of Secondary School Principals and Robert Schramke, Principal of Redford Union High School, Redford, Mich.

For more information about NASSP services,

products, and memberships, contact

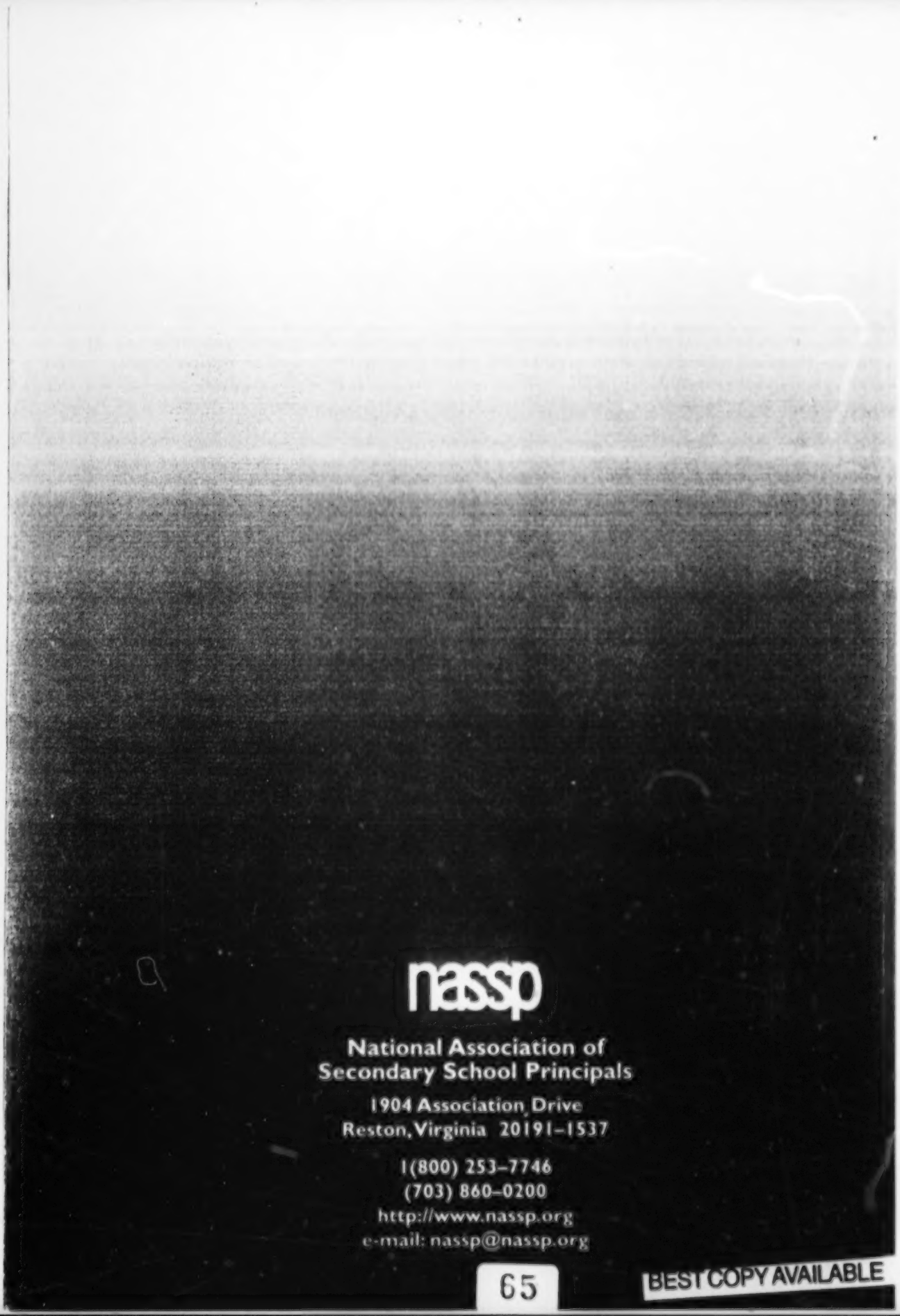
NASSP

1904 Association Drive, Reston, Virginia 20191-1537;

(703) 860-0200 or 1 (800) 253-7746;

e-mail: nassp@nassp.org;

NASSP website: http://www.nassp.org



nassp

National Association of
Secondary School Principals

1904 Association Drive
Reston, Virginia 20191-1537

1(800) 253-7746
(703) 860-0200
http://www.nassp.org
e-mail: nassp@nassp.org

BEST COPY AVAILABLE